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STATISTICAL INFORMATION

FOR THE

U.S. LIQUOR INDUSTRY

Office of Strategic & Policy Analysis
Distilled Spirits Council of the U.S., Inc.
October 30, 1990

The Annual Statistical Review ceased formal publication with the 1984/85 issue. Attached for your use are selected 1988 tables produced in-house for limited distribution. This office does not maintain a mailing list but does accept requests for the data when it is available.

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Apparent Consumption of Liquor in the United States, License and Control States, 1934 - 1989

Year	License States \a		Control States		Total	Percentage Change	Resident Population \c (000)	Adult Population (21 & Older) (000)	Per Capita Consumption (Resident) (gal/person)	Per Capita Consumption (21+) (gal/adult)	Number of States
	Wine Gallons (000)	Percentage of Total Consumption	Wine Gallons (000)	Percentage of Total Consumption	Wine Gallons (000)						
1934	45,892	79.2	12,073	20.8	57,965	—	126,374	77,819	0.46	0.75	28
1935	85,219	72.7	24,452	27.3	89,670	54.7	127,250	78,751	0.70	1.14	41
1936	87,107	71.3	35,011	28.7	122,118	36.2	128,053	79,825	0.96	1.53	43
1937	94,861	69.9	40,692	30.1	135,353	10.8	128,825	80,867	1.05	1.67	44
1938	88,447	69.7	38,446	30.3	126,893	-6.3	129,825	81,978	0.98	1.55	45
1939	94,522	70.2	40,131	29.8	134,654	6.1	130,880	83,104	1.03	1.62	46
1940	101,736	70.2	43,256	29.8	144,992	7.7	131,954	84,311	1.10	1.72	46
1941	111,224	70.3	46,933	29.7	158,157	9.1	133,121	85,563	1.19	1.85	46
1942	133,831	70.3	56,417	29.7	190,248	20.3	133,920	86,380	1.42	2.20	46
1943	105,879	72.8	39,650	27.2	145,529	-23.5	134,245	86,634	1.08	1.68	46
1944	124,414	74.6	42,265	25.4	166,680	14.5	132,885	85,599	1.25	1.96	46
1945	142,220	74.8	47,911	25.2	190,131	14.1	132,481	86,200	1.44	2.23	46
1946	176,029	75.8	55,952	24.2	230,982	21.5	140,054	91,965	1.65	2.51	46
1947	130,126	71.6	51,520	28.4	181,646	-21.4	143,446	93,500	1.27	1.94	46
1948	118,637	69.4	52,384	30.6	171,021	-5.8	146,093	94,913	1.17	1.80	46
1949	120,471	71.1	49,074	28.9	169,545	-0.9	148,665	96,364	1.14	1.76	47
1950	138,966	73.1	51,053	26.9	190,020	12.1	151,868	98,060	1.25	1.94	47
1951	139,765	72.1	54,002	27.9	193,767	2.0	153,982	98,914	1.26	1.96	47
1952	131,409	71.5	52,278	28.5	183,687	-5.2	156,393	99,862	1.17	1.84	47
1953	140,380	72.1	54,283	27.9	194,663	6.0	158,956	100,795	1.22	1.93	47
1954	136,956	72.3	52,515	27.7	189,471	-2.7	161,884	101,910	1.17	1.86	47
1955	145,422	72.9	54,148	27.1	199,571	5.3	165,069	103,179	1.21	1.93	47
1956	158,518	73.7	56,707	26.3	215,225	7.8	168,088	104,307	1.28	2.06	47
1957	154,560	72.9	57,514	27.1	212,073	-1.5	171,187	105,340	1.24	2.01	47
1958	159,257	73.9	56,209	26.1	215,466	1.6	174,149	106,243	1.24	2.03	47
1959	167,364	74.2	58,090	25.8	225,453	4.6	177,135	107,299	1.27	2.10	48
1960	175,573	74.8	59,141	25.2	234,715	4.1	179,979	108,348	1.30	2.17	49
1961	182,7[illegible]	75.7	58,742	24.3	241,449	2.9	182,992	109,418	1.32	2.21	49
1962	192,693	76.0	61,008	24.0	253,701	5.1	185,771	110,495	1.37	2.30	49
1963	196,780	76.0	62,200	24.0	258,979	2.1	188,483	111,698	1.37	2.32	49
1964	209,721	76.0	66,141	24.0	275,862	6.5	191,141	113,261	1.44	2.44	49
1965	223,889	76.1	70,355	23.9	294,244	6.7	193,526	114,595	1.52	2.57	50
b/1966	233,071	75.4	75,845	24.6	308,917	5.0	195,576	115,791	1.58	2.67	51
1967	244,368	75.3	80,094	24.7	324,462	5.0	197,457	116,940	1.64	2.77	51
1968	261,514	75.5	84,730	24.5	346,244	6.7	199,399	119,125	1.74	2.91	51
1969	272,534	75.3	89,240	24.7	361,774	4.5	201,385	121,038	1.80	2.99	51
1970	279,534	75.4	91,039	24.6	370,574	2.4	203,984	123,321	1.82	3.00	51
1971	288,368	75.4	94,156	24.6	382,523	3.2	206,827	125,668	1.85	3.04	51
1972	296,281	75.2	97,555	24.8	393,836	3.0	209,284	128,188	1.88	3.07	51
1973	306,727	75.4	100,332	24.6	407,059	3.4	211,357	130,623	1.93	3.12	51
1974	314,476	75.4	102,841	24.6	417,317	2.5	213,342	133,110	1.96	3.14	51
1975	318,697	75.3	104,735	24.7	423,432	1.5	215,465	135,748	1.97	3.12	51
1976	320,086	75.1	106,307	24.9	426,394	0.7	217,563	138,514	1.96	3.08	51
1977	323,813	75.0	107,740	25.0	431,553	1.2	219,760	141,335	1.96	3.05	51
1978	332,925	75.1	110,536	24.9	443,461	2.8	222,095	144,340	2.00	3.07	51
1979	335,418	75.0	112,078	25.0	447,497	0.9	224,567	147,398	1.99	3.04	51
1980	337,631	75.1	111,788	24.9	449,417	0.4	227,255	150,480	1.98	2.99	51
r 1981	339,144	75.5	110,276	24.5	449,420	0.0	229,637	153,359	1.96	2.93	51
r 1982	329,600	75.5	106,982	24.5	436,582	-2.9	231,996	156,269	1.88	2.79	51
r 1983	326,885	75.8	104,331	24.2	431,216	-1.2	234,284	159,014	1.84	2.71	51
r 1984	324,226	76.0	102,512	24.0	426,738	-1.0	236,477	161,661	1.80	2.64	51
r 1985	317,649	76.0	100,237	24.0	417,886	-2.1	238,736	164,205	1.75	2.54	51
r 1986	297,820	75.4	96,898	24.6	394,517	-5.6	241,107	166,647	1.64	2.37	51
r 1987	294,085	75.7	94,305	24.3	388,390	-1.6	243,419	168,805	1.60	2.30	51
r 1988	286,905	75.8	91,542	24.2	378,447	-2.6	245,807	170,823	1.54	2.22	51
1989	282,454	76.0	89,002	24.0	371,455	-1.8	248,239	172,781	1.50	2.15	51

NOTE: Because of rounding, detail may not add to total.

a\ Includes District of Columbia; Alaska beginning 1959; Oklahoma beginning 1960; Hawaii beginning 1965.

b\ Includes Mississippi gallonage from July through December 1966.

c\ Population data includes all states for all years except Hawaii & Alaska from 1934-49.

r Revised figures

SOURCES: Distilled Spirits Council of the United States, Inc.; Bureau of Census, U.S. Department of Commerce.

DISTILLED SPIRITS COUNCIL OF THE U.S., INC. - OCTOBER 30, 1990

U.S. Apparent Consumption of Liquor, by State, 1979 – 1989

(in 1,000 gallons)

STATES	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
a/ LICENSE STATES											
Alaska	1,186	1,240	1,362	1,378	1,470	1,397	1,426	1,219	1,208	1,153	1,172
Arizona	5,324	5,136	5,637	5,697	5,648	6,530	5,950	5,847	5,852	5,848	5,941
Arkansas	2,378	2,978	2,982	2,738	2,800	2,671	2,635	2,189	2,420	2,465	2,649
California	56,590	57,089	56,423	54,464	54,026	53,012	51,960	49,848	49,315	48,698	48,536
Colorado	6,855	7,287	7,181	6,905	6,766	6,845	6,617	5,916	5,875	5,760	5,333
Connecticut	7,356	7,386	7,343	7,569	7,733	7,617	7,634	7,366	7,232	6,949	6,376
Delaware	1,482	1,621	1,637	1,552	1,594	1,575	1,585	1,534	1,537	1,534	1,477
District of Columbia	3,903	3,828	3,768	3,503	3,556	3,350	3,085	2,594	2,971	2,473	2,200
Florida	25,234	26,492	26,615	26,264	26,478	25,756	27,203	26,153	26,109	25,707	25,731
* Georgia	11,264	11,037	11,119	10,977	11,416	11,566	11,540	10,782	10,893	10,880	11,473
c* Hawaii	2,175	2,175	2,165	2,155	2,180	1,803	1,807	1,690	1,752	1,770	1,689
Illinois	25,181	25,072	24,460	23,404	22,514	22,238	21,478	20,203	19,481	18,942	18,525
Indiana	8,147	8,019	8,093	7,898	7,816	7,654	7,728	7,028	7,150	7,139	6,873
Kansas	3,294	2,808	3,195	3,109	2,982	2,958	2,982	2,809	2,671	2,688	2,604
d\ Kentucky	5,149	5,084	5,217	4,206	4,973	4,816	4,732	4,341	4,325	4,283	4,188
Louisiana	8,001	8,090	8,107	8,058	7,813	7,786	7,188	6,514	6,218	6,148	5,859
Maryland	11,086	11,086	10,958	10,516	10,238	10,099	9,934	9,521	9,533	9,137	9,041
Massachusetts	14,111	14,373	14,238	14,121	14,218	14,446	14,150	13,184	13,255	12,636	12,371
Minnesota	9,053	9,370	9,307	8,797	8,744	8,582	8,561	7,519	7,689	7,446	7,425
* Missouri	7,379	6,938	6,892	6,258	6,321	6,368	6,752	6,927	7,152	6,803	6,563
Nebraska	2,676	2,659	2,659	2,523	2,409	2,334	2,298	2,066	2,011	1,994	1,928
Nevada	4,389	4,565	4,462	4,288	4,263	4,236	4,115	3,986	4,030	4,101	4,140
New Jersey	15,712	16,272	16,751	16,643	16,747	16,414	16,224	15,732	15,397	14,245	14,658
New Mexico	2,046	2,208	2,142	2,159	2,317	1,974	2,064	1,934	1,861	1,883	1,824
New York	40,328	39,776	39,332	37,897	36,389	36,325	34,515	32,373	31,815	30,692	28,984
North Dakota	1,391	1,386	1,408	1,424	1,347	1,268	1,265	1,082	1,110	1,103	1,062
Oklahoma	4,679	4,122	4,941	5,041	4,831	4,639	4,242	3,857	3,539	3,432	3,262
Rhode Island	2,034	2,133	1,970	1,988	1,936	1,986	2,006	1,820	1,858	1,918	1,721
* South Carolina	6,490	6,245	6,287	6,057	6,275	6,337	6,275	5,969	5,791	5,904	5,767
* South Dakota	1,359	1,401	1,358	1,267	1,252	1,181	1,287	1,041	1,063	1,034	947
Tennessee	6,132	6,115	6,355	6,274	6,286	6,385	6,249	5,929	5,876	5,772	5,673
Texas	21,776	22,149	23,563	23,987	23,342	23,729	22,183	20,275	18,999	18,378	18,204
* Wisconsin	11,259	11,511	11,219	10,483	10,302	10,151	9,981	8,375	8,099	7,993	8,256
LICENSE SUBTOTAL	335,418	337,631	339,144	329,600	326,885	324,226	317,649	297,620	294,085	286,905	282,454
b\ CONTROL STATES											
Alabama	5,969	5,475	5,463	5,413	5,400	5,270	5,161	4,979	4,803	4,799	4,735
Idaho	1,307	1,328	1,391	1,357	1,281	1,281	1,188	1,119	1,081	1,072	1,049
** Iowa	3,973	3,981	3,846	3,646	3,576	3,385	3,179	2,793	2,933	2,729	2,663
Maine	2,275	2,289	2,284	2,235	2,277	2,277	2,135	2,092	2,113	2,142	2,064
Michigan	17,998	17,982	17,510	17,148	16,882	16,994	16,758	15,987	15,204	14,978	14,354
** Mississippi	3,974	3,976	3,914	3,843	3,800	3,698	3,557	3,338	3,217	3,226	3,201
Montana	1,533	1,545	1,576	1,546	1,520	1,441	1,377	1,256	1,178	1,160	1,111
New Hampshire	4,452	4,439	4,419	4,328	4,405	4,472	4,354	4,184	4,118	4,115	4,304
North Carolina	9,425	9,677	9,889	9,875	9,489	9,460	9,397	9,162	8,965	8,723	8,488
Ohio	15,113	14,835	14,041	13,627	13,433	12,621	12,639	12,550	12,292	11,465	10,689
Oregon	4,662	4,787	4,706	4,492	4,372	4,237	4,017	3,869	3,814	3,824	3,814
Pennsylvania	16,980	16,733	16,853	16,165	15,714	15,600	15,246	15,098	14,638	13,719	13,381
Utah	1,424	1,502	1,499	1,434	1,358	1,423	1,467	1,473	1,407	1,388	1,364
Vermont	1,414	1,364	1,327	1,243	1,215	1,189	1,138	1,099	1,055	1,014	971
Virginia	9,329	9,411	9,451	9,344	8,980	8,918	8,674	8,422	8,240	8,017	7,782
Washington	8,393	8,648	8,518	8,125	7,784	7,814	7,419	7,088	6,978	6,939	6,929
West Virginia	2,764	2,667	2,445	2,049	1,820	1,658	1,570	1,544	1,508	1,489	1,377
** Wyoming	1,093	1,150	1,147	1,113	1,025	974	958	864	780	744	726
CONTROL SUBTOTAL	112,078	111,786	110,276	106,982	104,331	102,512	100,237	96,898	94,305	91,542	89,002
U.S. TOTAL	447,497	449,417	449,420	436,582	431,216	426,738	417,886	394,517	388,390	378,447	371,455

NOTE: Because of rounding, detail may not add to total.

a\License States: Where available, license state consumption is based on taxed gallons reported by state authorities. In other states, consumption is estimated from state tax collections. Beginning with 1985, a new source is used for Arizona. Also beginning in 1985, Florida special (domestic) liquor products are added into the Florida data. Finally, beginning with 1985, the monthly data for Indiana is no longer shifted while the monthly data for Tennessee & Texas are shifted to more closely reflect consumer purchases.

* For Georgia, Hawaii (1985–1986), Missouri, South Carolina, South Dakota and (after 1984) Wisconsin, consumption represents shipments by distillers to wholesalers. Beginning with 1985, the monthly data for these states are shifted to more closely reflect consumer purchases.

b\Control States: All control state data, with three exceptions, are package sales in retail stores and case sales to on–premise licensees.

** In Mississippi, Wyoming and (since March 1987) Iowa, consumption represents wholesale sales from state–controlled warehouses to private retail establishments.

c\Beginning in 1987 source of Hawaii consumption is state tax collections and may not be comparable with previous years.

d\Method of calculating Kentucky consumption was revised for years 1981–89.

SOURCES: Distilled Spirits Council of the U.S., Inc., National Alcohol Beverage Control Association.

DISTILLED SPIRITS COUNCIL OF THE U.S., INC. – OCTOBER 30, 1990

Apparent Consumption of Liquor by State, Total and Per Capita, 1988 and 1989

Resident Population July 1, 1989 (000)	Percentage of Total Population	Percentage of Total U.S. Consumption 1989	Percentage of Total U.S. Consumption 1988	STATE	Apparent Consumption Rank 1989	Apparent Consumption Rank 1988	Apparent Consumption 000 Gallons 1989	Apparent Consumption 000 Gallons 1988	Percent Change	Apparent Consumption Per Capita Gallons per Person 1989	Apparent Consumption Per Capita Gallons per Person 1988	Apparent Consumption Per Capita Rank 1989	Apparent Consumption Per Capita Rank 1988
				LICENSE STATES[a]									
527	0.21	0.32	0.30	Alaska	45	46	1,172	1,153	1.6	2.22	2.20	4	5
3,556	1.43	1.60	1.56	Arizona	21	23	5,941	5,848	1.6	1.67	1.68	17	20
2,406	0.97	0.71	0.65	Arkansas	34	38	2,649	2,485	7.5	1.10	1.03	43	48
29,063	11.71	13.07	12.87	California	1	1	48,536	48,696	-0.3	1.67	1.72	18	16
3,317	1.34	1.44	1.52	Colorado	25	25	5,333	5,760	-7.4	1.61	1.74	22	14
3,239	1.30	1.72	1.84	Connecticut	20	18	6,376	6,949	-8.2	1.97	2.15	8	6
673	0.27	0.40	0.41	Delaware	42	42	1,477	1,534	-3.7	2.19	2.32	5	4
604	0.24	0.59	0.65	District of Columbia	36	35	2,200	2,473	-11.0	3.64	4.01	3	1
12,671	5.10	6.93	6.79	Florida	3	3	25,731	25,707	0.1	2.03	2.08	7	8
6,436	2.59	3.09	2.87	*Georgia	10	11	11,473	10,880	5.4	1.78	1.72	11	17
1,112	0.45	0.45	0.47	Hawaii	41	41	1,689	1,770	-4.5	1.52	1.61	26	25
11,658	4.70	4.99	5.01	Illinois	4	4	18,525	18,942	-2.2	1.59	1.63	23	23
5,593	2.25	1.85	1.89	Indiana	18	17	6,873	7,138	-3.7	1.23	1.28	35	35
2,513	1.01	0.70	0.71	Kansas	35	34	2,604	2,688	-3.2	1.04	1.08	45	44
3,727	1.50	1.13	1.13	Kentucky	28	27	4,188	4,283	-2.2	1.12	1.15	41	41
4,382	1.77	1.58	1.62	Louisiana	22	21	5,859	6,146	-4.7	1.34	1.39	30	30
4,694	1.89	2.43	2.41	Maryland	12	12	9,041	9,137	-1.0	1.93	1.98	9	9
5,913	2.38	3.33	3.34	Massachusetts	9	9	12,371	12,636	-2.1	2.09	2.15	6	7
4,353	1.75	2.00	1.97	Minnesota	16	16	7,425	7,446	-0.3	1.71	1.73	14	15
5,159	2.08	1.77	1.80	*Missouri	19	20	6,563	6,803	-3.5	1.27	1.32	34	34
1,611	0.65	0.52	0.53	Nebraska	38	38	1,928	1,994	-3.3	1.20	1.24	37	37
1,111	0.45	1.11	1.08	Nevada	29	29	4,140	4,101	0.9	3.73	3.89	2	2
7,736	3.12	3.95	3.76	New Jersey	6	7	14,658	14,245	2.9	1.89	1.84	10	11
1,528	0.62	0.49	0.50	New Mexico	39	40	1,824	1,883	-3.1	1.19	1.25	38	36
17,950	7.23	7.80	8.11	New York	2	2	28,984	30,692	-5.6	1.61	1.71	20	18
660	0.27	0.29	0.29	North Dakota	47	47	1,082	1,103	-3.7	1.61	1.65	21	21
3,224	1.30	0.88	0.91	Oklahoma	31	31	3,282	3,432	-4.9	1.01	1.06	47	46
998	0.40	0.46	0.51	Rhode Island	40	39	1,721	1,918	-10.2	1.72	1.93	12	10
3,512	1.41	1.55	1.58	*South Carolina	23	22	5,767	5,904	-2.3	1.64	1.70	19	19
715	0.29	0.25	0.27	*South Dakota	50	49	947	1,034	-8.4	1.32	1.45	31	28
4,940	1.99	1.53	1.53	Tennessee	24	24	5,673	5,772	-1.7	1.15	1.18	40	39
16,991	6.84	4.90	4.86	Texas	5	5	18,204	18,378	-0.9	1.07	1.09	44	43
4,867	1.96	2.22	2.11	*Wisconsin	14	15	8,256	7,993	3.3	1.70	1.65	15	22
177,439	71.48	76.04	75.81	Subtotal License States			282,454	286,905	-1.6	1.59	1.63		
				CONTROL STATES[b]									
4,118	1.66	1.27	1.27	Alabama	26	26	4,735	4,799	-1.3	1.15	1.17	39	40
1,014	0.41	0.28	0.28	Idaho	48	48	1,049	1,072	-2.1	1.03	1.07	46	45
2,840	1.14	0.72	0.72	**Iowa	33	33	2,663	2,729	-2.4	0.94	0.96	49	49
1,222	0.49	0.56	0.57	Maine	37	37	2,064	2,142	-3.7	1.69	1.78	16	13
9,273	3.74	3.86	3.96	Michigan	7	6	14,354	14,978	-4.2	1.55	1.62	24	24
2,621	1.06	0.86	0.85	**Mississippi	32	32	3,201	3,226	-0.8	1.22	1.23	36	38
806	0.32	0.30	0.31	Montana	46	45	1,111	1,160	-4.3	1.38	1.44	28	29
1,107	0.45	1.16	1.09	New Hampshire	27	28	4,304	4,115	4.6	3.89	3.79	1	3
6,571	2.65	2.29	2.30	North Carolina	13	13	8,488	8,723	-2.7	1.29	1.34	32	32
10,907	4.39	2.88	3.03	Ohio	11	10	10,689	11,465	-6.8	0.98	1.06	48	47
2,820	1.14	1.03	1.01	Oregon	30	30	3,814	3,824	-0.3	1.35	1.38	29	31
12,040	4.85	3.60	3.62	Pennsylvania	8	8	13,381	13,719	-2.5	1.11	1.14	42	42
1,707	0.69	0.37	0.37	Utah	44	44	1,364	1,388	-1.7	0.80	0.82	50	50
567	0.23	0.26	0.27	Vermont	49	50	971	1,014	-4.2	1.71	1.82	13	12
6,098	2.46	2.10	2.12	Virginia	15	14	7,782	8,017	-2.9	1.28	1.33	33	33
4,761	1.92	1.87	1.83	Washington	17	19	6,929	6,939	-0.1	1.46	1.49	27	27
1,857	0.75	0.37	0.39	West Virginia	43	43	1,377	1,489	-7.5	0.74	0.79	51	51
475	0.19	0.20	0.20	**Wyoming	51	51	726	744	-2.3	1.53	1.56	25	26
70,804	28.52	23.96	24.19	Subtotal Control States			89,002	91,542	-2.8	1.26	1.30		
248,239	100	100	100	U.S. TOTAL			371,455	378,447	-1.8	1.50	1.54		

NOTE: Because of rounding, detail may not add to total.

a\ License States: Where available, license state consumption is based on taxed gallonage reported by state authorities. In other states, estimated from state tax collections by dividing revenues collected by the state tax rate per gallon.
* In Georgia, Missouri, South Carolina, South Dakota, and Wisconsin, consumption represents shipments by distillers to wholesalers.

b\ Control States: All control state data, with three exceptions, are package sales in retail stores and case sales to on-premise licensees.
** In Mississippi, Wyoming and (beginning in March 1987) Iowa, the data represents wholesale sales from state-controlled warehouses to private retail establishments.

SOURCES: Distilled Spirits Council of the U.S.; National Alcohol Beverage Control Association; Bureau of Census, U.S. Department of Commerce.

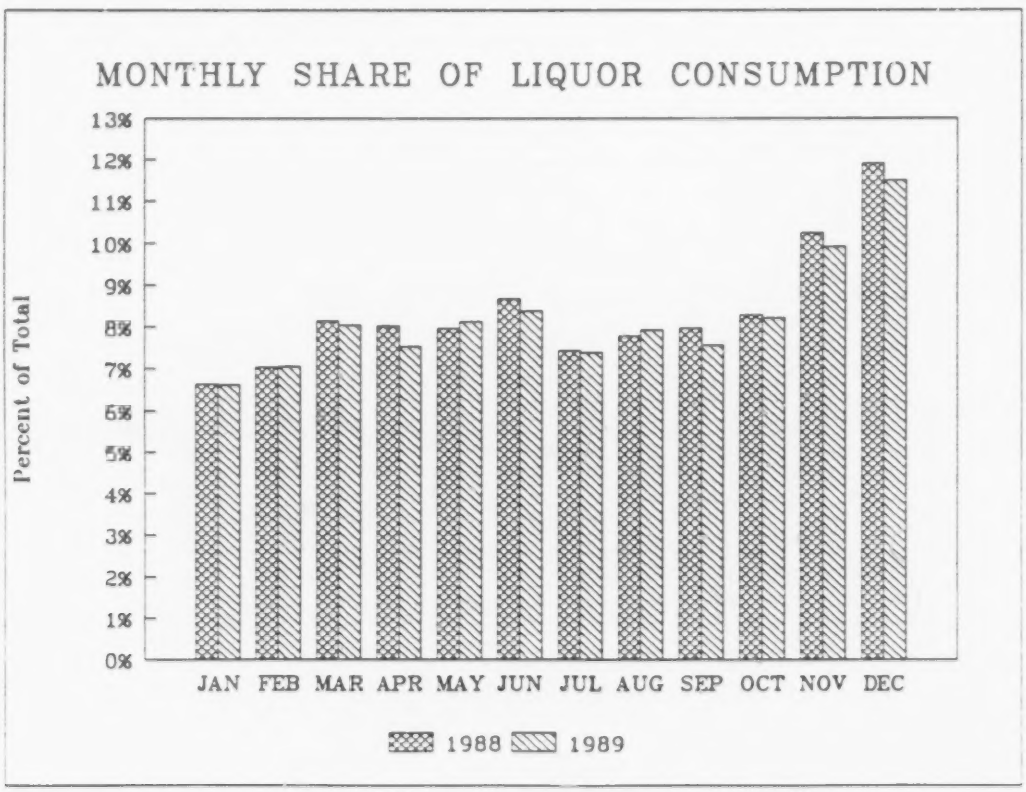
DISTILLED SPIRITS COUNCIL OF THE U.S., INC.—OCTOBER 30, 1990

Apparent Consumption of Liquor in the United States by Month
1988 and 1989

(000 Wine Gallons)

Month	1989	Percentage of Annual Consumption	1988	Percentage of Annual Consumption	Percentage Change
January	25,012	6.7	25,107	6.6	-0.4
February	26,645	7.2	26,611	7.0	0.1
March	30,416	8.2	30,767	8.1	-1.1
April	28,468	7.7	30,333	8.0	-6.1
May	30,693	8.3	30,137	8.0	1.8
June	31,727	8.5	32,813	8.7	-3.3
July	27,899	7.5	28,076	7.4	-0.6
August	29,943	8.1	29,419	7.8	1.8
September	28,604	7.7	30,127	8.0	-5.1
October	31,052	8.4	31,292	8.3	-0.8
November	37,507	10.1	38,725	10.2	-3.1
December	43,488	11.7	45,040	11.9	-3.4
Total	371,456	100.0	378,447	100.0	-1.8

NOTE: Because of rounding, detail may not add to total.



Apparent Consumption of Liquor, Beer and Wine, By State, Total and Per Capita, 1989

State	1989 Apparent Consumption			1989 Population		Per Capita Consumption (Resident Population)			Adult Per Capita Consumption (Population 21 Years and Older)		
	Liquor	Beer	Wine	Resident	Adult	Liquor	Beer	Wine	Liquor	Beer	Wine
	(1,000 Gallons)			(1,000)		(Gallons per Person)			(Gallons per Adult)		
LICENSE STATES											
Alaska	1,172	13,624	1,389	527	336	2.22	25.85	2.64	3.49	40.55	4.13
Arizona	5,941	103,181	7,465	3,556	2,414	1.67	29.02	2.10	2.46	42.74	3.09
Arkansas	2,649	45,736	1,857	2,406	1,644	1.10	19.01	0.77	1.61	27.82	1.13
California	48,536	668,519	108,925	29,063	20,077	1.67	23.69	3.75	2.42	34.29	5.43
Colorado	5,333	79,237	7,549	3,317	2,301	1.61	23.89	2.28	2.32	34.44	3.28
Connecticut	6,376	64,158	9,580	3,239	2,338	1.97	19.81	2.96	2.73	27.44	4.10
Delaware	1,477	16,769	1,584	673	474	2.19	24.92	2.35	3.12	35.38	3.34
District of Columbia	2,200	16,238	3,352	604	440	3.64	26.88	5.55	5.00	36.90	7.62
Florida	25,73[illegible]	357,552	31,332	12,671	9,286	2.03	28.22	2.47	2.77	38.50	3.37
Georgia	11,47[illegible]	138,647	9,468	6,436	4,322	1.78	21.54	1.47	2.65	32.08	2.19
Hawaii	1,686	30,138	2,910	1,112	771	1.52	27.10	2.62	2.19	39.09	3.77
Illinois	18,525	284,460	25,245	11,658	8,151	1.59	24.40	2.17	2.27	34.90	3.10
Indiana	6,873	120,376	6,668	5,593	3,865	1.23	21.52	1.19	1.78	31.15	1.73
Kansas	2,604	48,725	1,966	2,513	1,740	1.04	19.39	0.78	1.50	28.00	1.13
Kentucky	4,188	68,099	2,727	3,727	2,578	1.12	18.27	0.73	1.62	26.42	1.06
Louisiana	5,859	106,895	6,082	4,382	2,901	1.34	24.39	1.39	2.02	36.85	2.10
Maryland	9,041	106,660	10,095	4,694	3,319	1.93	22.72	2.15	2.72	32.14	3.04
Massachusetts	12,371	139,366	17,659	5,913	4,303	2.09	23.57	2.99	2.88	32.39	4.10
Minnesota	7,425	98,078	7,168	4,353	3,029	1.71	22.53	1.65	2.45	32.38	2.37
Missouri	6,563	121,854	7,147	5,159	3,622	1.27	23.62	1.39	1.81	33.64	1.97
Nebraska	1,928	38,833	1,892	1,611	1,114	1.20	24.10	1.17	1.73	34.86	1.70
Nevada	4,140	44,877	5,039	1,111	789	3.73	40.39	4.54	5.25	56.88	6.39
New Jersey	14,658	158,485	24,550	7,736	5,563	1.89	20.49	3.17	2.63	28.49	4.41
New Mexico	1,824	42,653	2,606	1,528	1,003	1.19	27.91	1.71	1.82	42.53	2.60
New York	28,984	359,860	47,336	17,950	12,797	1.61	20.05	2.64	2.26	28.12	3.70
North Dakota	1,062	16,197	583	660	451	1.61	24.54	1.03	2.36	35.91	1.51
Oklahoma	3,262	59,395	2,601	3,224	2,219	1.01	18.42	0.81	1.47	26.77	1.17
Rhode Island	1,721	24,783	2,915	998	721	1.72	24.83	2.92	2.39	34.37	4.04
South Carolina	5,767	84,388	5,192	3,512	2,382	1.64	24.03	1.48	2.42	35.43	2.18
South Dakota	947	15,473	629	715	487	1.32	21.64	0.88	1.94	31.77	1.29
Tennessee	5,673	104,120	4,248	4,940	3,452	1.15	21.08	0.86	1.64	30.16	1.23
Texas	18,204	469,158	26,621	16,991	11,232	1.07	27.61	1.57	1.62	41.77	2.37
Wisconsin	8,256	146,866	9,201	4,867	3,390	1.70	30.18	1.89	2.44	43.32	2.71
Subtotal License States	282,454	4,213,400	403,681	177,439	123,511	1.59	23.75	2.28	2.29	34.11	3.27
CONTROL STATES											
Alabama	4,735	80,092	4,267	4,118	2,812	1.15	19.45	1.04	1.68	28.48	1.52
Idaho	1,049	21,915	1,828	1,014	661	1.03	21.61	1.80	1.59	33.15	2.77
Iowa	2,663	64,604	3,185	2,840	2,003	0.94	22.75	1.12	1.33	32.25	1.59
Maine	2,064	26,592	2,548	1,222	860	1.69	21.76	2.09	2.40	30.92	2.96
Michigan	14,354	210,798	16,879	9,273	6,381	1.55	22.73	1.82	2.25	33.04	2.65
Mississippi	3,201	56,647	1,451	2,621	1,719	1.22	21.61	0.55	1.86	32.95	0.84
Montana	1,111	21,916	1,417	806	553	1.38	27.19	1.76	2.01	39.63	2.56
New Hampshire	4,304	36,658	3,452	1,107	775	3.89	33.30	3.12	5.55	47.56	4.45
North Carolina	8,488	133,314	11,230	6,571	4,602	1.29	20.29	1.71	1.84	28.97	2.44
Ohio	10,689	260,695	15,030	10,907	7,584	0.98	23.90	1.38	1.41	34.37	1.98
Oregon	3,814	63,514	8,133	2,820	2,002	1.35	22.52	2.88	1.91	31.73	4.06
Pennsylvania	13,381	296,136	13,925	12,040	8,667	1.11	24.60	1.16	1.54	34.17	1.61
Utah	1,364	21,680	1,237	1,707	987	0.80	12.70	0.72	1.38	21.97	1.25
Vermont	971	14,720	1,818	567	397	1.71	25.96	3.21	2.45	37.08	4.58
Virginia	7,782	143,930	11,879	6,098	4,317	1.28	23.60	1.95	1.80	33.34	2.75
Washington	6,929	104,217	15,154	4,761	3,331	1.46	21.89	3.18	2.08	31.29	4.55
West Virginia	1,377	37,541	1,234	1,857	1,305	0.74	20.22	0.66	1.06	28.77	0.95
Wyoming	726	10,936	611	475	317	1.53	23.02	1.29	2.29	34.50	1.93
Subtotal Control States	89,002	1,606,103	115,278	70,804	49,273	1.26	22.68	1.63	1.81	32.60	2.34
U.S. TOTAL	371,455	5,819,503	518,959	248,239	172,781	1.50	23.44	2.09	2.15	33.68	3.00

NOTE: Because of rounding, detail may not add to total.

SOURCES: Distilled Spirits Council of the U.S., Wine Institute; Beer Institute; U.S. Bureau of the Census.

DISTILLED SPIRITS COUNCIL OF THE UNITED STATES, INC. - OCTOBER 30, 1990

Apparent Consumption of Alcohol from Liquor, Beer and Wine, by State, Total and Per Capita, 1989

State	Apparent Consumption of Absolute Alcohol (000 Alcohol Gallons)				Consumption Per Capita (Based on Resident Population) (Alcohol Gallons Per Person)			
	Liquor (40%)	Beer (4.5%)	Wine (11%)	Total	Liquor	Beer	Wine	Total
LICENSE STATES								
Alaska	469	613	153	1,235	0.89	1.16	0.29	2.34
Arizona	2,376	4,643	821	7,841	0.67	1.31	0.23	2.20
Arkansas	1,060	2,058	204	3,322	0.44	0.86	0.08	1.38
California	19,414	30,983	11,982	62,379	0.67	1.07	0.41	2.15
Colorado	2,133	3,566	830	6,529	0.64	1.07	0.25	1.97
Connecticut	2,551	2,887	1,054	6,491	0.79	0.89	0.33	2.00
Delaware	591	755	174	1,520	0.88	1.12	0.26	2.26
District of Columbia	880	731	369	1,980	1.46	1.21	0.61	3.28
Florida	10,292	16,090	3,447	29,829	0.81	1.27	0.27	2.35
Georgia	4,589	6,239	1,041	11,870	0.71	0.97	0.16	1.84
Hawaii	676	1,356	320	2,352	0.61	1.22	0.29	2.12
Illinois	7,410	12,801	2,777	22,988	0.64	1.10	0.24	1.97
Indiana	2,749	5,417	733	8,900	0.49	0.97	0.13	1.59
Kansas	1,041	2,193	216	3,450	0.41	0.87	0.09	1.37
Kentucky	1,675	3,064	300	5,039	0.45	0.82	0.08	1.35
Louisiana	2,344	4,810	669	7,823	0.53	1.10	0.15	1.79
Maryland	3,617	4,800	1,110	9,527	0.77	1.02	0.24	2.03
Massachusetts	4,948	6,271	1,942	13,162	0.84	1.06	0.33	2.23
Minnesota	2,970	4,414	788	8,172	0.68	1.01	0.18	1.88
Missouri	2,625	5,483	786	8,895	0.51	1.06	0.15	1.72
Nebraska	771	1,747	209	2,727	0.48	1.08	0.13	1.69
Nevada	1,656	2,019	554	4,230	1.49	1.82	0.50	3.81
New Jersey	5,863	7,132	2,701	15,696	0.76	0.92	0.35	2.03
New Mexico	730	1,919	287	2,936	0.48	1.26	0.19	1.92
New York	11,594	16,194	5,207	32,994	0.65	0.90	0.29	1.84
North Dakota	425	729	75	1,229	0.64	1.10	0.11	1.86
Oklahoma	1,305	2,673	286	4,264	0.40	0.83	0.09	1.32
Rhode Island	689	1,115	321	2,124	0.69	1.12	0.32	2.13
South Carolina	2,307	3,797	571	6,675	0.66	1.08	0.16	1.90
South Dakota	379	696	69	1,144	0.53	0.97	0.10	1.60
Tennessee	2,269	4,685	467	7,422	0.48	0.95	0.09	1.50
Texas	7,282	21,112	2,928	31,322	0.43	1.24	0.17	1.84
Wisconsin	3,302	6,609	1,012	10,923	0.68	1.36	0.21	2.24
Subtotal License States	112,982	189,603	44,405	346,989	0.64	1.07	0.25	1.96
CONTROL STATES								
Alabama	1,894	3,604	469	5,968	0.46	0.88	0.11	1.45
Idaho	420	986	201	1,607	0.41	0.97	0.20	1.58
Iowa	1,065	2,907	350	4,323	0.38	1.02	0.12	1.52
Maine	825	1,197	280	2,302	0.68	0.98	0.23	1.88
Michigan	5,742	9,486	1,857	17,084	0.62	1.02	0.20	1.84
Mississippi	1,280	2,549	160	3,989	0.49	0.97	0.06	1.52
Montana	444	986	156	1,586	0.55	1.22	0.19	1.97
New Hampshire	1,722	1,659	380	3,760	1.56	1.50	0.34	3.40
North Carolina	3,395	5,999	1,235	10,630	0.52	0.91	0.19	1.62
Ohio	4,275	11,731	1,653	17,660	0.39	1.08	0.15	1.62
Oregon	1,526	2,858	895	5,278	0.54	1.01	0.32	1.87
Pennsylvania	5,352	13,326	1,532	20,210	0.44	1.11	0.13	1.68
Utah	546	976	136	1,657	0.32	0.57	0.08	0.97
Vermont	388	662	200	1,251	0.68	1.17	0.35	2.21
Virginia	3,113	6,477	1,307	10,896	0.51	1.06	0.21	1.79
Washington	2,772	4,690	1,667	9,128	0.58	0.99	0.35	1.92
West Virginia	551	1,689	136	2,376	0.30	0.91	0.07	1.28
Wyoming	290	492	67	850	0.61	1.04	0.14	1.79
Subtotal Control States	35,601	72,275	12,681	120,556	0.50	1.02	0.18	1.70
U.S. TOTAL	148,582	261,878	57,085	467,545	0.60	1.05	0.23	1.88

NOTE: Because of rounding, detail may not add to total.

SOURCES: Distilled Spirits Council of the U.S., Wine Institute; Beer Institute; U.S. Bureau of the Census.

DISTILLED SPIRITS COUNCIL OF THE UNITED STATES, INC. - OCTOBER 30, 1989

Estimated Liquor Entering U.S. Trade Channels, by Class and Type, 1979 – 1989 *

(000 Wine Gallons)

Class and Type	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
DOMESTIC WHISKEY											
Bonded	4,409	7,661	2,276	1,867	1,621	1,360	1,128	889	815	755	682
Straight	64,185	55,857	63,288	58,510	55,384	52,684	48,933	44,719	45,203	44,064	44,185
Blended Straights	1,254	1,234	1,789	1,143	930	921	952	896	890	915	762
Over 160 Proof	168	1,287	4,153	4,369	4,339	3,861	3,747	4,128	4,190	1,375	2,042
Blended Whiskey	46,131	39,120	35,398	32,766	29,549	29,412	26,571	23,479	21,961	21,799	20,294
Subtotal	116,147	105,159	106,904	98,655	91,823	88,238	81,331	74,112	73,059	68,908	67,965
IMPORTED WHISKEY											
Scotch	52,033	46,972	47,656	45,255	45,879	41,788	40,271	35,778	34,310	30,790	30,311
Canadian	53,021	52,382	54,639	51,864	51,935	54,018	49,788	46,041	46,091	44,450	44,145
Irish & Others	693	541	821	586	770	624	632	478	793	675	869
Subtotal	105,747	99,895	103,116	97,705	98,584	96,430	90,691	82,298	81,194	75,917	75,325
TOTAL ALL WHISKEY	221,894	205,054	210,020	196,360	190,407	184,668	172,022	156,410	154,253	144,826	143,291
GIN											
Domestic	38,981	NA	38,295	35,536	35,052	33,414	31,494	29,039	29,309	27,417	26,539
Imported	6,297	NA	5,872	5,556	6,287	6,128	6,139	5,929	5,363	5,227	5,437
Subtotal	45,278	43,618	44,167	41,092	41,339	39,542	37,633	34,967	34,671	32,644	32,076
VODKA											
Domestic	97,976	NA	98,622	97,604	98,519	96,494	94,410	89,474	86,066	84,725	83,545
Imported	235	NA	1,995	2,153	2,997	4,127	4,263	5,771	6,394	7,779	10,527
Subtotal	98,211	96,193	100,617	99,757	101,516	100,621	98,672	95,244	92,460	92,504	94,072
RUM											
Puerto Rico\a	27,124	NA	26,881	25,262	27,107	27,131	27,077	24,383	26,156	25,351	27,710
Virgin Islands	1,538	NA	3,122	3,248	3,396	3,132	3,084	3,105	2,922	2,835	2,421
Other Domestic	3,378	NA	1,218	2,382	2,698	2,686	2,342	3,147	2,849	2,105	2,696
Subtotal Domestic Rum	32,040	NA	31,221	30,892	33,201	32,949	32,502	30,635	31,927	30,290	32,828
Subtotal Imported Rum	921	NA	1,357	1,394	1,500	1,570	1,526	1,461	1,586	1,602	2,039
Subtotal All Rum	32,961	29,568	32,578	32,286	34,701	34,519	34,028	32,097	33,514	31,893	34,867
BRANDY											
Domestic	13,725	NA	14,541	13,707	14,626	14,522	14,470	13,023	13,441	12,922	12,946
Imported	4,989	NA	6,769	6,670	7,339	7,683	7,862	7,686	7,312	6,661	6,774
Subtotal	18,714	18,667	21,310	20,377	21,965	22,205	22,332	20,709	20,754	19,583	19,720
CORDIALS & SPECIALTIES											
Domestic	29,416	NA	26,059	25,360	24,072	27,478	32,039	32,977	35,486	30,502	27,297
Imported	8,155	NA	13,704	14,661	15,269	16,642	16,176	15,022	15,876	14,015	15,218
Subtotal	37,571	38,404	39,763	40,021	39,341	44,120	48,215	47,999	51,361	44,518	42,515
COCKTAILS & MIXED DRINKS											
Domestic	10,834	NA	8,302	7,550	8,258	7,123	7,450	5,229	7,104	6,652	5,955
Imported	122	NA	202	197	134	505	118	711	141	241	15
Subtotal	10,956	10,281	8,504	7,747	8,392	7,628	7,568	5,940	7,246	6,893	5,969
TEQUILA Subtotal	6,783	7,271	7,949	8,404	9,750	9,764	9,646	9,375	10,224	10,481	11,423
NON-WHISKEY											
Domestic	222,972	NA	217,040	210,649	213,728	211,980	212,365	200,377	203,333	192,510	189,209
Imported	27,502	NA	37,848	39,035	43,276	46,419	45,730	45,956	46,896	46,006	51,432
Subtotal	250,474	244,002	254,888	249,684	257,004	258,399	258,095	246,333	250,230	238,516	240,641
NOT ELSEWHERE SPECIFIED											
Domestic	300	NA	349	986	545	638	963	754	730	765	890
Imported	1,913	NA	254	291	245	234	368	422	438	278	320
Subtotal	2,213	636	603	1,277	790	872	1,331	1,176	1,168	1,043	1,210
TOTAL DOMESTIC DISTILLED SPIRITS	339,419	NA	324,293	310,290	306,096	300,856	294,659	275,243	277,122	262,183	258,064
TOTAL IMPORTED DISTILLED SPIRITS	135,162	NA	141,218	137,031	142,105	143,083	136,789	128,675	128,528	122,202	127,078
GRAND TOTAL	474,581	449,691	465,511	447,321	448,201	443,939	431,448	403,918	405,651	384,385	385,142

NOTE: Because of rounding, detail may not add to total. Includes some conversion from proof gallons to wine gallons.

* Defined as liquor bottled in the U.S. for domestic use and export; also U.S. liquor imports for consumption in containers holding not over 1 gallon.

a\ Through 1985 the source for data on Puerto Rican rum bottled in Puerto Rico was the Puerto Rico Rum Producers Association. Beginning with 1986, the source changed to the U.S. Census Bureau. The source for Puerto Rican rum bottled in the U.S., the Bureau of Alcohol, Tobacco & Firearms, is the same for all years.

NA – Data for 1980 are not strictly speaking comparable with 1981 and earlier year data because of reporting and definitional difficulties in the first nine months of 1980 that resulted from the change to the all-in-bond system by the U.S. Bureau of Alcohol, Tobacco & Firearms. Also for these reasons, a breakdown between domestic and imported non-whiskey liquor for 1980 is not reliable and therefore is not given.

SOURCES: Bureau of Alcohol, Tobacco and Firearms, U.S. Treasury Department; Bureau of Census, U.S. Commerce Department; Virgin Island Rum Council; Puerto Rico Rum Producers Association.

DISTILLED SPIRITS COUNCIL OF THE U.S., INC. – OCTOBER 30, 1990

U. S. Commercial Exports Of Liquor, 1975 - 1989

(000 Proof Gallons)

Year	WHISKEY			NON-WHISKEY							Total All Liquor
	Bourbon	Other	Total	Rum	Brandy	Gin\a	Vodka\b	Cordials\b	Other	Total	
1975	4,621	734	5,356	193	34	-	-	-	2,717	2,945	8,301
1976	3,900	836	4,737	227	57	-	-	-	3,442	3,726	8,463
1977	4,056	714	4,770	239	22	-	-	-	3,176	3,437	8,207
1978	3,852	977	4,829	303	63	54	-	-	3,416	3,835	8,664
1979	3,580	1,017	4,598	341	56	55	-	-	3,199	3,650	8,248
1980	3,270	983	4,253	291	47	172	-	-	3,800	4,309	8,563
1981	3,194	1,558	4,751	386	100	89	-	-	3,710	4,285	9,037
1982	3,367	1,540	4,907	379	99	40	-	-	4,643	5,162	10,069
1983	3,124	1,630	4,754	439	39	46	817	301	2,247	3,890	8,644
1984	3,515	1,861	5,376	363	53	86	748	257	620	2,127	7,503
1985	3,332	1,872	5,204	369	49	62	963	521	603	2,567	7,771
1986	3,791	2,228	6,019	385	81	47	985	543	1,475	3,517	9,536
1987	5,084	2,938	8,021	530	164	99	743	540	1,001	3,077	11,098
1988	9,127	3,089	12,216	814	360	100	902	567	1,096	3,839	16,055
1989	*	*	*	614	439	134	2,254	1,022	1,714	6,177	*

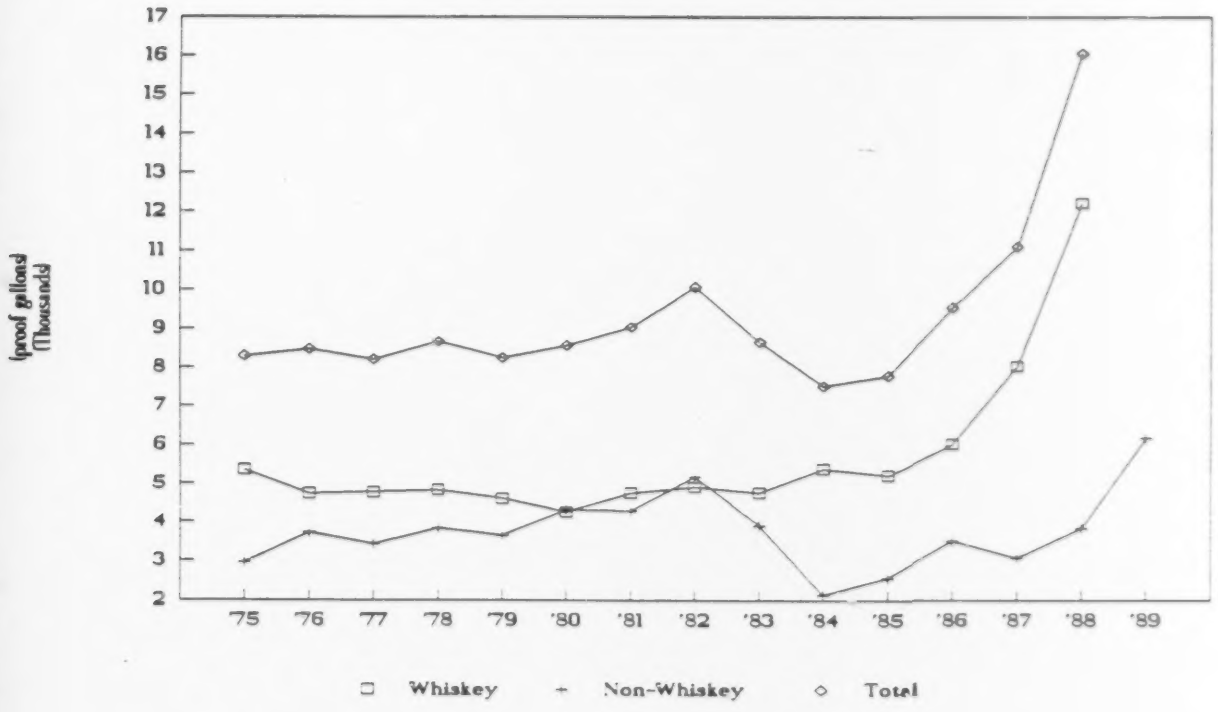
NOTE: Because of rounding, detail may not add to total. Does not include shipments to Puerto Rico and the U.S. Virgin Islands. A proof gallon equals a standard U.S. gallon of 231 cubic inches at 60 degrees Farenheit containing 50% ethyl alcohol by volume (100 proof).

* Whiskey data is currently being revised by the Census Bureau. 1989 data will be released as soon as DISCUS receives all revisions. Revised 1988 whiskey numbers will be released in the next couple of years.

a\ Before 1978, gin included in "Other".
b\ Before 1983, vodka and cordials included in "Other".

SOURCE: Bureau of Census, U.S. Department of Commerce.

U.S. LIQUOR EXPORTS: 1975 - 1989



DISTILLED SPIRITS COUNCIL OF THE U.S., INC. - OCTOBER 30, 1990

Commercial Exports of Liquor, by Class and Country of Destination, 1989 \a

(000 Proof Gallons)

COUNTRY OF DESTINATION	NON-WHISKEY						
	Rum	Brandy	Gin	Vodka	Cordials	N.E.S.	Total
ARGENTINA	0	0	153	0	0	2,485	2,638
AUSTRALIA	0	0	0	12,763	5,872	22,329	40,964
AUSTRIA	0	0	0	0	0	0	0
BAHAMAS	6,087	7,160	0	1,054	24,149	67,451	105,901
BAHRAIN	0	0	0	0	0	394	394
BARBADOS	0	0	0	7,788	453	9,940	18,181
BELGIUM	17,695	167	9,904	93,058	22,240	2,994	146,058
BELIZE	1,427	0	0	301	141	0	1,869
BERMUDA	0	0	0	42,940	1,634	17,927	62,501
BOLIVIA	0	0	0	0	0	1,434	1,434
BR PACIFIC ISLANDS	903	0	0	0	0	0	903
BR VIRGIN IS	29,996	2,867	490	50,875	3,500	43,765	131,493
BRAZIL	0	0	0	12,363	7,254	3,054	22,671
BULGARIA	0	0	0	0	0	0	0
CANADA	72,122	45,223	19,191	29,906	405,632	62,650	634,724
CAYMAN ISLANDS	53,872	0	0	0	2,059	597	56,528
CHILE	23,702	0	0	2,456	0	0	26,158
CHINA (PRC)	0	0	0	0	0	0	0
CHINA (TAIWAN)	0	4,727	1,521	15,213	0	1,489	22,950
COLOMBIA	0	2,399	0	604	20,715	14,148	37,866
CONGO	0	0	0	0	0	0	0
COSTA RICA	1,475	2,856	0	4,242	0	0	8,573
CYPRUS	0	0	0	0	0	0	0
DENMARK	0	0	0	24,397	4,457	0	28,854
DOMINICAN REP	6,222	3,782	5,510	5,361	9,597	1,806	32,278
ECUADOR	4,318	0	919	0	6,694	8,114	20,045
EL SALVADOR	0	0	0	4,400	1,147	0	5,547
F REP GERMANY	10,400	2,976	0	20,598	40,176	1,882	76,032
FINLAND	9,799	1,026	0	2,174	215	0	13,214
FR IND OC A	0	0	0	0	221	0	221
FRANCE	0	0	0	4,517	1,883	25,460	31,860
FRENCH W INDIES	4,434	0	395	0	0	162	4,991
GIBRALTAR	0	0	0	0	0	0	0
GREECE	1,978	0	521	5,442	0	6,676	14,617
GUATEMALA	0	3,351	0	0	1,541	0	4,892
GUINEA	0	0	1,476	2,274	0	0	3,750
HAITI	1,827	0	0	0	0	7,618	9,445
HONDURAS	0	0	0	832	0	1,353	2,185
HONG KONG	334	0	1,184	18,061	11,680	26,240	57,499
ICELAND	733	0	3,975	58,450	292	246	63,696
INDIA	0	0	0	0	0	0	0
INDONESIA	0	320	0	2,140	0	0	2,460
IRAQ	0	0	0	5,702	0	0	5,702
IRELAND	0	0	0	1,268	0	1,981	3,249
ISRAEL	0	0	0	19,468	5,195	7,724	32,387
ITALY	12,628	4,623	0	0	229,179	23,704	270,134
JAMAICA	0	0	2,225	1,307	1,958	14,676	20,166
JAPAN	16,436	230,472	56,719	211,542	27,061	679,602	1,221,832
JORDAN	0	0	0	0	0	0	0
KOREA, REPUBLIC OF	889	0	147	183	0	1,341	2,560

Commercial Exports of Liquor, by Class and Country of Destination, 1989 \a

(000 Proof Gallons)

COUNTRY OF DESTINATION	NON-WHISKEY						
	Rum	Brandy	Gin	Vodka	Cordials	N.E.S.	Total
LEBANON	0	0	0	6,223	529	6,812	13,564
LIBERIA	0	0	1,383	527	515	7,524	9,949
MALAYSIA	0	0	0	4,890	0	899	5,789
MALTA	0	0	0	0	0	0	0
MEXICO	9,091	102,041	3,149	570,120	3,855	254,559	942,815
NETH ANTILLES	223,387	2,138	4,626	50,709	22,968	84,446	388,274
NETHERLANDS	32,591	4,684	14,003	23,357	45,441	83,556	203,632
NEW CALEDONIA	0	0	0	0	0	0	0
NEW ZEALAND	2,847	0	0	2,219	2,342	3,678	11,086
NIGERIA	0	0	0	0	0	0	0
NORWAY	0	0	1,896	322,820	1,523	4,245	330,484
OTHER PAC IS	0	0	0	0	190	0	190
PAKISTAN	0	0	0	951	0	801	1,752
PANAMA	13,487	725	0	39,001	653	66,562	120,428
PAPUA NEW GUINEA	0	0	0	0	0	0	0
PARAGUAY	0	0	0	0	0	1,945	1,945
PERU	0	178	0	0	903	3,484	4,565
PHILIPPINES	1,391	10,271	0	6,763	0	6,532	24,957
POLAND	0	0	0	189,434	0	44,505	233,939
PORTUGAL	0	0	0	0	0	0	0
SINGAPORE	0	409	0	12,892	462	10,548	24,311
SOUTH AFRICA	0	0	0	0	0	14,290	14,290
SOUTH WEST AFRICA	0	0	0	0	0	511	511
SPAIN	0	0	0	0	0	0	0
SURINAM	8,024	0	0	0	0	246	8,270
SWEDEN	30,282	0	0	298,089	78,632	21,640	428,643
SWITZERLAND	0	0	0	0	280	225	505
TANZANIA	568	0	0	0	0	0	568
THAILAND	5,362	0	0	28,793	2,259	13,461	49,875
TR TER PAC IS	1,258	213	621	8,306	0	3,511	13,909
TRIN & TOBAGO	7,407	0	0	0	490	0	7,897
TURKEY	0	0	0	0	0	0	0
TURKS ISLAND	0	0	380	1,532	213	1,383	3,508
UNITED ARAB EM	0	0	0	0	0	200	200
UNITED KINGDOM	0	4,497	1,440	23,890	3,735	5,416	38,978
URUGUAY	0	1,484	2,231	0	430	9,628	13,773
VENEZUELA	0	0	0	0	0	0	0
WESTERN SAMOA	1,060	0	383	1,840	0	0	3,283
YUGOSLAVIA	0	0	0	0	21,993	3,724	25,717
TOTAL	614,029	438,588	134,440	2,254,032	1,022,357	1,713,574	6,177,021

Note: Proof gallon equals a standard U.S. gallon of 231 cubic inches at 60 degrees Farenheit containing 50% ethyl alcohol by volume (100 proof)
N.E.S. = Not Elsewhere Specified.

\a: Whiskey exports for 1989 are being checked and revised by the Census Bureau and therefore are not included in this year's Export Tables. 1988 Whiskey data are subject to revision.

SOURCE: Bureau of the Census, U.S. Department of Commerce.

United States Dutiable Imports of Liquor for Consumption, 1934–1989

(000 Tax or Proof Gallons)\a

Year	WHISKEY			NON-WHISKEY								Total All Liquor
	Bottled	Bulk\b	Total	Gin	Rum	Brandy	Cordials	Vodka	Tequila	Bitters	Other	Total	
1934	–	–	5,624	153	316	556	–	–	–	–	584	1,609	7,234
1935	–	–	5,847	60	482	445	–	–	–	–	227	1,216	7,063
1940	–	–	9,715	56	407	773	261	–	–	–	26	1,523	11,238
1945	–	–	8,600	335	979	1,433	151	–	–	62	6,308	9,269	17,868
1950	14,966	365	15,330	108	232	791	319	–	–	54	43	1,546	16,877
1955	21,465	355	21,820	291	197	1,214	445	–	–	68	48	2,262	24,082
1960	31,302	1,645	32,947	1,149	245	1,828	812	–	–	104	116	4,255	37,203
1961	32,095	2,359	34,454	1,365	212	1,903	903	–	–	131	133	4,647	39,101
1962	34,685	3,485	38,170	1,611	214	1,992	998	–	–	130	171	5,118	43,287
1963	35,557	4,618	40,175	1,752	220	2,269	1,128	–	–	95	190	5,653	45,828
1964	36,947	7,463	44,411	2,167	491	1,925	1,326	–	–	119	251	6,278	50,689
1965	40,885	9,449	50,334	2,498	248	2,004	1,515	–	–	135	361	6,761	57,095
1966	40,906	12,017	52,923	2,808	273	2,152	1,662	–	–	103	529	7,527	60,450
1967	44,389	15,316	59,705	3,036	261	2,286	2,160	–	–	133	667	8,562	68,267
1968	48,370	18,132	66,502	3,193	284	2,310	2,315	–	–	133	805	9,041	75,544
1969	51,730	22,357	74,086	3,522	320	2,459	2,725	–	–	170	938	10,133	84,219
1970	53,757	26,176	79,933	3,869	367	2,674	2,917	–	–	155	988	10,970	90,903
1971	60,541	28,747	89,287	4,251	375	3,311	3,470	–	–	147	1,298	12,851	102,139
1972	55,918	31,768	87,686	4,201	399	2,694	3,145	–	–	192	1,838	12,470	100,156
1973	57,960	34,345	92,304	4,627	379	2,997	3,723	–	–	188	3,061	14,976	107,280
1974	58,097	35,821	93,917	4,965	426	2,788	4,056	–	4,308	153	354	17,049	110,966
1975	51,777	43,201	94,978	4,821	682	2,830	4,433	–	5,180	205	332	18,483	113,461
1976	52,448	39,621	92,069	5,073	588	3,894	4,005	–	5,556	206	423	20,645	112,713
1977	51,228	39,994	91,223	5,324	657	3,306	5,610	–	5,860	225	852	21,833	113,056
1978	54,767	47,118	101,886	6,212	874	4,381	7,370	–	6,361	228	1,292	26,716	128,602
1979	44,240	44,141	88,381	5,992	714	4,165	6,423	–	6,343	291	1,258	25,186	113,567
1980	41,496	44,505	86,000	5,754	1,090	4,885	7,303	1,463	6,890	182	184	27,751	113,751
1981	41,774	44,760	86,534	5,463	969	5,596	8,277	1,966	7,078	154	214	29,717	116,251
1982	38,027	38,570	76,597	5,246	774	5,996	8,923	1,745	6,657	127	201	29,668	106,265
1983	37,434	46,411	83,845	5,781	1,265	6,098	8,729	2,179	8,069	166	219	32,506	116,351
1984	37,678	40,362	78,039	5,812	5,838 \c	6,365	10,323	3,283	7,856	144	207	39,829	117,868
1985	34,369	45,311	79,680	5,775	1,491	6,376	9,669	3,478	8,866	134	307	36,097	115,777
1986	30,853	36,829	67,682	5,593	1,426	6,117	9,275	4,606	8,454	69	366	35,905	103,587
1987	30,433	36,137	66,570	5,067	962	5,921	9,563	5,126	8,867	94	367	35,967	102,537
1988	30,471	30,789	61,261	4,985	822	5,244	8,570	6,227	8,537	86	229	34,701	95,962
1989	30,781	27,458	58,240	5,077	1,052	5,533	8,814	8,326	8,693	74	287	37,857	96,096

NOTE: Because of rounding, detail may not add to total. Cordials included in "Other" before 1940; Vodka included in "Other" before 1980; Tequila included in "Other" before 1974; Bitters included in "Other" before 1945.

a\ Data for the years 1934 through 1978 are in tax gallons; data after 1978 are in proof gallons.

b\ Indicates shipments in wood or metal containers each holding more than one gallon.

c\ Substantial quantities of imported bulk rum were shifted from Customs' bonded warehouses to BATF bonded warehouses in 1984 (about 5 million gallons from Jamaica). As a result, these supplies have been described as imports for consumption although bottling & consumption may not take place for a year or more. The shift occurred because, with passage of the Caribbean Recovery Act in 1984, rum from Carribbean nations now enters duty free. This makes storage in Customs' bonded warehouses unnecessary to defer payment of import duties.

Tax Gallon: unit of distilled spirits on which the federal excise tax (FET) is levied. The FET on all spirits is $12.50 per proof gallon so that a tax gallon is equivalent to a proof gallon. Before Jan. 1, 1980, imports of bottled distilled spirits were taxed at a rate per gallon, regardless of the proof.

Proof Gallon: standard U.S. gallon of 231 cubic inches at 60 degrees Farenheit containing 50 percent ethyl alcohol by volume (100 proof)

SOURCE: Bureau of the Census, U.S. Department of Commerce.

DISTILLED SPIRITS COUNCIL OF THE U.S., INC. – OCTOBER 30, 1990

U.S. Dutiable Imports of Liquor for Consumption, by Class and Country of Origin, 1989

(in proof gallons)

COUNTRY OF ORIGIN	GRAND TOTAL	Whiskey	Gin	Rum	Cordials	Vodka	Tequila	Brandy	Bitters	N.E.S.
ARGENTINA	1,152	0	0	0	0	0	0	0	0	1,152
AUSTRALIA	3,378	0	0	210	189	2,979	0	0	0	0
AUSTRIA	12,848	0	0	1,713	4,432	6,435	0	80	188	0
BAHAMAS	16,490	0	0	7,273	9,004	0	0	213	0	0
BARBADOS	431,437	0	0	431,424	13	0	0	0	0	0
BELGIUM	23,266	0	6,517	808	10,267	3,131	0	2,543	0	0
BERMUDA	8,234	0	0	8,234	0	0	0	0	0	0
BOLIVIA	716	0	0	0	0	0	0	716	0	0
BR VIRGIN IS	21,286	0	0	21,286	0	0	0	0	0	0
BRAZIL	8,990	0	0	0	2,351	0	0	2,826	0	3,813
BRUNEI	260	0	0	260	0	0	0	0	0	0
BULGARIA	3,847	0	2,145	0	0	507	0	1,195	0	0
BURMA	11,316	0	0	6,117	0	5,199	0	0	0	0
CANADA	35,753,871	34,986,445	5,362	0	616,206	129,727	0	15,907	91	133
CHILE	1,815	0	0	0	0	0	0	1,815	0	0
CHINA (PRC)	33,287	0	0	0	3,362	5,322	0	236	0	24,367
CHINA (TAIWAN)	9,938	0	0	0	0	0	0	7,595	0	2,343
COLOMBIA	161,120	0	0	6,529	91,985	0	0	162	0	62,444
COSTARICA	2,640	0	0	0	2,640	0	0	0	0	0
CYPRUS	792	0	0	0	0	507	0	285	0	0
CZECHOSLAVAKIA	5,062	0	0	0	3,019	546	0	52	1,445	0
DENMARK	154,685	0	0	0	9,277	130,831	0	0	50	14,527
DOMINICAN REP	71,410	0	0	71,410	0	0	0	0	0	0
F REP GERMANY	591,741	0	3,709	156	493,279	44,608	0	46,614	303	3,072
FINLAND	778,631	0	1,117	0	795	776,369	0	49	0	301
FRANCE	6,054,536	0	60,454	5,261	1,516,261	37,553	0	4,419,744	476	14,711
GAMBIA	743	0	0	0	76	0	0	0	0	0
GIBRALTAR	667	0	0	0	0	667	0	0	0	0
GREECE	109,597	0	7,865	0	93,439	0	0	1,034	0	7,259
GREENLAND	190	0	0	0	0	190	0	0	0	0
GUATEMALA	6,929	0	0	4,237	1,516	0	0	1,176	0	0
GUYANA	7,486	0	0	7,486	0	0	0	0	0	0
HAITI	19,483	0	0	17,657	0	0	0	1,826	0	0
HONG KONG	3,863	545	0	0	0	0	0	0	0	3,318
HUNGARY	4,155	0	0	0	0	0	0	4,155	0	0
ICELAND	226,746	0	0	0	40	226,706	0	0	0	0
INDIA	3,677	0	3,677	0	0	0	0	0	0	0
INDONESIA	87	0	0	0	87	0	0	0	0	0
IRAQ	1,313	0	0	0	0	0	0	0	0	1,313
IRAQ–SAUDI NEUTRAL	389	0	0	389	0	0	0	0	0	0
IRELAND	1,645,402	530,599	5,582	0	1,104,122	1,331	0	3,368	0	0
ISRAEL	11,869	0	0	0	5,872	374	0	4,244	0	1,579
ITALY	1,643,070	32	6,133	854	1,500,353	10,529	0	101,348	17,033	6,788
JAMAICA	547,393	0	0	414,924	129,966	2,503	0	0	0	0
JAPAN	84,719	23,406	0	2,332	11,379	21,296	0	998	0	25,308
KOREA, REPUBLIC OF	22,830	0	0	0	2,588	1,427	0	0	0	18,815
LEBANON	1,372	0	0	0	398	0	0	0	0	974
MALI	1,375	0	0	0	1,375	0	0	0	0	0
MALTA	21	0	0	0	0	0	0	21	0	0
MAURITIUS	151	0	0	0	0	151	0	0	0	0
MEXICO	11,692,089	0	9,876	2,722	2,457,019	7,636	8,693,494	486,230	0	35,112
MOROCCO	864	0	0	0	0	843	0	21	0	0
MOZAMBIQUE	399	0	0	0	399	0	0	0	0	0
NETH ANTILLES	26,920	0	300	0	16,694	8,686	0	1,240	0	0
NETHERLANDS	128,453	0	16,249	426	91,649	18,579	0	649	901	0
NEW ZEALAND	7,533	0	2,491	11	659	0	0	4,372	0	0
NIGER	7,259	0	3,897	0	3,362	0	0	0	0	0
NORWAY	17,708	0	0	0	396	15,122	0	513	0	1,677
PERU	2,170	0	0	0	0	0	0	2,170	0	0
PHILIPPINES	255	0	0	255	0	0	0	0	0	0
POLAND	47,458	0	0	0	5,161	39,202	0	204	0	2,891
PORTUGAL	55,693	0	0	0	14,394	0	0	40,129	0	1,170
ROMANIA	519	0	0	0	519	0	0	0	0	0
SINGAPORE	394	0	0	0	0	0	0	394	0	0
SOUTH AFRICA	30	0	0	0	0	0	0	30	0	0
SOUTH WEST AFRICA	499	0	0	0	87	412	0	0	0	0
SPAIN	374,282	0	7,074	4,199	93,152	2,009	0	267,544	0	304
SPANISH AFRICA	1,912	0	0	1,912	0	0	0	0	0	0
SWEDEN	4,757,572	0	1,638	0	8,266	4,739,631	0	3,934	0	4,103
SWITZERLAND	4,596	0	0	0	2,638	79	0	648	1,231	0
SYRIA	418	0	0	0	0	418	0	0	0	0
THAILAND	1,730	0	0	541	0	0	0	0	0	1,189
TRIN & TOBAGO	54,066	0	0	5,752	0	0	0	0	48,314	0
TURKEY	5,613	0	0	0	4,176	0	0	168	0	1,269
UNITED KINGDOM	28,653,173	22,698,490	4,932,972	14,356	497,216	398,576	0	76,493	3,599	31,471
USSR	1,698,686	0	0	0	886	1,685,188	0	5,952	254	6,406
VENEZUELA	18,364	0	0	12,663	117	0	0	0	0	5,584
YEMEN (SANA)	81	0	0	0	81	0	0	0	0	0
YUGOSLAVIA	31,792	0	0	300	2,613	756	0	24,472	0	3,651
TOTAL	96,096,060	58,239,517	5,077,458	1,051,697	8,813,576	8,326,025	8,693,494	5,533,365	73,884	287,044

NOTE: Proof gallon equals a standard U.S. gallon of 231 cubic inches at 60 degrees Farenheit containing 50% ethyl alcohol by volume (100 proof).
N.E.S. = Not Elsewhere Specified.

SOURCE: Bureau of the Census, U.S. Department of Commerce.

Sales of Liquor: Retail Sales in Control States, Supplier Shipments in License States, by Class & Type, 1989

(in wine gallons)

State	WHISKEY															Total All Whiskey
	Bonded Bourbon	Bonded Rye	Straight Bourbon	Straight Rye	Straight Blends	Blended Whiskey	Blended Light	Light	Other	Total Domestic	Scotch	Canadian	Irish	Other	Total Imported	
CONTROL STATES: (Gallonage Sales at State Stores)																
Alabama	6,054	-	987,829	770	-	373,703	-	31,121	5,760	1,405,237	233,843	667,218	2,459	-	903,520	2,308,757
Idaho	405	-	116,941	443	-	55,661	-	-	14	173,464	50,007	263,377	1,642	-	315,026	488,490
Iowa (a)	1,715	-	270,230	782	-	283,068	-	2,658	271	558,724	130,292	463,374	1,681	5	595,352	1,154,076
Maine	1,004	-	86,601	699	-	178,356	-	-	178	266,838	89,985	306,651	2,472	-	399,088	665,926
Michigan	6,658	-	716,227	3,732	-	1,116,808	-	-	1,142	1,844,565	732,093	2,558,296	10,892	152	3,301,433	5,145,998
Mississippi (a)	11,496	-	714,402	480	-	420,804	-	-	3,376	1,150,558	135,590	492,620	845	-	629,055	1,779,613
Montana	594	-	126,616	603	-	43,657	-	-	192	171,462	45,604	268,841	1,298	-	315,833	487,295
New Hampshire	3,652	-	222,828	556	-	292,981	-	-	7	520,024	401,757	538,527	7,184	167	947,635	1,467,659
North Carolina	15,509	-	1,684,856	2,995	-	525,700	-	26,171	21,090	2,276,321	482,735	1,270,317	4,998	69	1,758,119	1,034,440
Ohio	38,246	-	1,184,577	3,150	-	850,970	-	6,159	8,219	2,091,321	696,764	1,646,890	11,912	-	2,356,566	4,447,887
Oregon	1,904	-	352,379	1,557	-	326,529	-	1,339	528	683,236	204,946	696,181	8,372	273	909,772	1,593,008
Pennsylvania	30,870	-	928,771	14,646	-	1,281,918	-	-	2,872	2,258,977	921,455	1,750,118	24,706	-	2,696,279	4,955,256
Utah	1,041	-	155,196	151	-	49,801	-	1,091	393	207,673	64,531	310,248	1,381	-	376,160	583,833
Vermont	704	-	49,641	377	-	47,461	-	-	-	98,183	75,052	139,729	2,879	-	217,660	315,843
Virginia	12,803	-	1,714,318	2,694	-	376,365	-	-	13,523	2,119,703	582,884	747,440	12,724	292	1,343,340	3,463,043
Washington	7,370	-	492,541	3,870	-	495,705	-	1,031	2,663	1,002,960	412,033	1,499,276	19,559	6	1,930,874	2,933,854
West Virginia	4,142	-	345,305	614	-	99,189	-	-	1,371	450,621	54,741	238,212	1,033	-	293,986	744,607
Wyoming (a)	414	-	87,488	364	-	25,873	-	-	32	114,171	50,331	170,304	977	-	221,612	335,783
CONTROL STATE TOTAL	146,579	-	10,235,646	38,083	-	6,842,549	-	69,570	61,631	17,424,058	5,366,713	14,026,619	117,014	964	19,511,310	33,905,368
LICENSE STATES: (Supplier Shipments)																
Alaska (b)	52	-	74,830	263	-	44,813	-	-	40	119,998	45,883	301,172	3,141	-	350,196	470,194
Arizona	1,478	-	600,619	1,442	-	289,991	-	6,019	8,417	907,966	496,362	658,063	5,496	5	1,159,916	2,067,882
Arkansas (b)	5,398	-	709,983	403	-	206,561	-	1,313	10,264	933,902	141,856	358,808	1,299	335	502,298	1,436,200
California (b)	7,826	-	4,011,975	13,751	-	2,402,778	-	303	2,908	6,439,541	3,327,504	3,039,972	132,042	4,803	6,504,321	12,943,862
Colorado (b)	1,755	-	719,875	1,793	-	239,104	-	350	16,031	978,908	417,323	553,193	11,662	269	982,467	1,961,375
Connecticut	6,379	-	257,116	505	-	404,432	-	-	279	668,710	616,711	379,292	13,013	30	1,009,046	1,677,756
Delaware	7,409	-	105,050	204	-	90,973	-	-	360	203,996	100,188	222,621	3,001	51	325,861	529,864
Dist. of Columbia (b)	3,158	-	198,973	316	-	23,631	-	-	700	226,777	336,580	99,792	7,947	31	444,350	671,127
Florida	24,692	-	2,491,748	6,959	-	1,235,229	-	-	2,688	3,760,316	3,087,460	3,005,913	30,941	780	6,125,084	9,885,400
Georgia	20,385	-	1,169,391	1,066	-	606,150	-	2,236	17,648	1,816,876	816,422	1,895,613	10,251	72	2,722,358	4,539,234
Hawaii	199	-	96,472	195	-	45,477	-	1,332	-	143,675	115,447	104,640	906	1,187	222,180	365,855
Illinois	81,249	-	1,300,501	3,324	-	989,453	-	4,014	2,429	2,380,970	1,177,454	2,271,503	19,500	1,039	3,469,496	5,850,466
Indiana	42,213	-	824,381	1,183	-	605,520	-	156	1,955	1,475,408	309,389	1,030,751	5,098	360	1,345,598	2,821,006
Kansas	2,630	-	533,749	475	-	143,227	-	889	673	681,643	201,412	356,148	1,798	17	559,375	1,241,018
Kentucky (b)	30,652	-	1,204,301	1,310	-	349,859	-	3,370	2,484	1,591,976	168,662	346,631	2,899	13	518,105	2,110,081
Louisiana	27,222	-	1,003,124	1,850	-	333,269	-	3,911	4,798	1,374,174	346,769	885,405	4,647	41	1,236,862	2,611,036
Maryland (b)	43,838	-	650,483	10,470	-	375,554	-	-	362,353	1,442,698	865,901	939,298	19,942	34	1,825,175	3,267,873
Massachusetts (b)	7,007	-	452,509	810	-	728,961	-	-	208	1,189,495	950,372	1,015,096	29,799	827	1,996,094	3,185,589
Minnesota	2,325	-	331,588	1,464	-	284,676	-	82	98	620,231	328,259	1,512,335	6,078	176	1,846,845	2,467,076
Missouri	11,426	-	1,028,273	811	-	339,139	-	9,932	9,116	1,398,697	482,791	872,648	7,639	166	1,363,441	2,762,138
Nebraska	822	-	219,897	312	-	111,408	-	-	374	332,813	148,439	446,232	1,363	32	596,066	928,879
Nevada	932	-	353,788	882	-	197,877	-	6,341	1,559	561,379	270,855	614,950	7,841	175	893,801	1,455,180
New Jersey (b)	21,395	-	464,563	864	-	738,555	-	-	1,463	1,226,860	1,664,672	739,443	28,110	1,103	2,433,228	3,660,088
New Mexico	306	-	231,675	464	-	88,419	-	25,644	9,312	355,720	116,260	207,684	2,895	89	326,908	682,628
New York (b)	17,218	-	887,362	2,371	-	1,403,633	-	189	13,190	2,323,963	2,548,074	1,570,137	70,008	5,457	419	6,517,639
North Dakota	92	-	40,663	86	-	23,542	-	-	33	64,416	22,481	382,195	340	155	405,171	469,587
Oklahoma	9,143	-	634,310	1,720	-	207,890	-	9,134	3,689	865,886	279,551	685,363	3,300	-	968,214	1,834,100
Rhode Island	1,378	-	68,829	135	-	113,598	-	197	7	184,144	139,239	97,876	3,140	982	241,217	425,361
South Carolina	8,326	-	686,566	588	-	235,240	-	1,840	7,760	940,320	357,432	1,294,952	3,609	60	1,656,053	2,596,373
South Dakota	101	-	68,229	158	-	33,366	-	1,174	-	103,028	37,245	381,931	332	-	419,508	522,536
Tennessee (b)	18,293	-	1,265,597	986	-	409,498	-	6,045	24,647	1,724,966	310,934	952,202	5,127	86	1,268,349	2,993,315
Texas	32,781	-	3,122,171	4,676	-	1,076,747	-	7,659	1,558	4,245,592	1,858,021	2,477,968	20,263	46	4,356,298	8,601,890
Wisconsin	3,930	-	415,695	55,734	-	870,932	-	287	188	1,346,666	250,446	600,489	5,454	202	856,591	2,203,257
LICENSE STATE TOTAL	442,010	-	26,224,085	116,569	-	15,249,502	-	92,417	507,127	42,631,710	22,336,274	30,300,373	466,699	18,802	48,930,891	95,755,855
TOTAL ALL STATES	588,589	-	36,459,731	154,652	-	22,092,051	-	161,987	568,758	60,055,768	27,702,987	44,326,992	585,913	19,566	88,442,201	129,661,223

Sales of Liquor: Retail Sales in Control States, Supplier Shipments in License States, by Class & Type, 1989 (continued)

(in wine gallons)

State	NON - WHISKEY							Total Non-Whiskey	Not Specified	Total Domestic Spirits	Total Imported Spirits	1989 Grand Total	1988 Grand Total
	Gin	Vodka	Rum	Brandy	Cordials & Specs.	Cocktails	Tequila						
CONTROL STATES (Gallonage Sales at State Stores)													
Alabama	639,680	972,305	234,359	218,175	174,596	81,014	106,367	2,426,496	-	3,563,366	1,171,887	4,735,253	4,799,176
Idaho	59,780	225,594	71,009	24,571	121,893	12,465	45,466	560,778	-	813,664	430,604	1,049,268	1,072,193
Iowa (a)	136,656	560,477	139,171	49,762	508,826	36,164	79,031	1,509,077	-	1,876,116	787,037	2,663,153	2,729,386
Maine	126,175	467,565	249,692	23,636	477,250	24,818	28,659	1,397,795	-	1,446,058	617,665	2,063,721	2,142,016
Michigan	938,929	3,243,440	1,270,424	965,552	2,349,760	188,166	251,835	9,208,106	-	9,368,197	4,985,907	14,354,104	14,977,566
Mississippi (a)	493,444	414,087	122,100	163,621	101,527	85,158	40,980	1,420,916	-	2,404,017	796,511	3,200,528	3,226,439
Montana	69,849	199,361	71,019	60,532	192,615	5,056	24,941	623,373	-	702,181	408,487	1,110,668	1,160,261
New Hampshire	374,556	1,000,823	411,347	105,411	801,804	79,421	63,104	2,836,466	-	2,636,636	1,668,489	4,304,125	4,115,288
North Carolina	971,217	2,097,773	488,734	261,047	404,748	87,502	142,306	4,453,327	-	6,222,512	2,265,255	8,487,767	8,722,800
Ohio	954,586	2,149,337	819,609	416,087	1,062,254	589,215	232,763	6,223,851	16,995	7,242,195	3,446,536	10,688,733	11,464,511
Oregon	250,964	975,831	272,063	131,208	408,926	20,376	161,763	2,221,129	-	2,487,670	1,326,467	3,814,137	3,824,191
Pennsylvania	1,188,438	3,263,526	1,026,836	332,663	2,185,900	262,571	165,349	8,425,283	-	9,215,981	4,164,558	13,380,539	13,718,525
Utah	57,633	419,378	122,569	19,067	95,843	10,565	55,312	780,367	-	865,802	498,398	1,364,200	1,387,811
Vermont	90,353	245,981	81,747	19,822	189,391	8,581	19,196	655,073	-	587,978	382,938	970,916	1,013,572
Virginia	977,631	1,641,298	628,112	276,070	533,396	128,338	134,330	4,319,173	-	5,796,802	1,985,414	7,782,216	8,016,595
Washington	458,402	1,662,159	578,740	198,683	701,058	79,167	316,761	3,994,970	-	4,062,441	2,866,383	6,928,824	6,938,564
West Virginia	82,225	294,375	74,113	12,142	132,450	8,246	29,189	632,740	-	998,614	378,733	1,377,347	1,489,454
Wyoming (a)	35,303	124,070	56,810	17,456	121,070	11,987	22,692	390,388	-	437,618	288,553	726,171	743,540
CONTROL STATE TOTAL	7,905,821	19,957,378	6,718,454	3,295,495	10,564,206	1,717,807	1,920,046	52,079,307	16,995	60,531,846	28,469,824	89,001,670	91,541,886
LICENSE STATES: (Supplier Shipments)													
Alaska (b)	50,255	187,764	137,803	9,302	188,073	44,144	40,708	658,049	860	611,324	517,779	1,129,103	1,006,823
Arizona	372,320	1,362,975	492,243	105,198	496,970	222,913	289,928	3,342,547	1,897	3,542,751	1,869,575	5,412,326	5,490,613
Arkansas (b)	187,771	416,493	109,838	22,995	126,830	151,581	51,190	1,066,698	644	1,876,432	627,110	2,503,542	2,557,701
California (b)	2,759,826	10,156,281	2,602,811	1,255,850	3,821,506	1,647,501	1,782,421	24,026,196	13,587	24,669,622	12,314,023	36,983,645	39,088,079
Colorado (b)	341,466	1,199,860	462,266	117,917	712,811	91,059	293,834	3,219,213	9,167	3,477,275	1,712,480	5,189,755	5,464,848
Connecticut	535,950	2,159,625	682,062	168,748	973,193	163,828	99,887	4,683,293	1,321	4,219,021	2,143,349	6,362,370	6,493,221
Delaware	176,801	331,122	115,964	69,832	174,491	54,477	17,827	940,514	2,992	978,041	495,322	1,473,363	1,538,364
Dist. of Columbia (b)	280,921	527,028	263,129	146,564	129,359	79,493	27,184	1,455,678	938	1,361,294	766,449	2,127,743	2,257,411
Florida	2,316,060	6,728,691	2,430,904	697,353	2,052,691	628,947	561,965	15,416,611	11,413	15,777,570	9,535,854	25,313,424	26,432,276
Georgia	1,828,203	2,640,732	760,335	649,399	582,314	124,152	298,810	6,883,945	22,833	7,639,715	3,806,297	11,446,012	10,840,559
Hawaii	94,681	390,885	273,757	42,485	173,812	24,589	58,923	1,059,132	230	982,828	442,389	1,425,217	1,593,358
Illinois	1,697,259	3,804,542	1,293,550	1,136,973	2,021,492	529,276	325,962	10,809,043	27,672	10,915,390	5,771,791	16,687,181	17,264,340
Indiana	583,665	1,333,005	459,187	185,325	815,710	266,316	125,359	3,768,567	4,773	4,586,566	2,006,781	6,594,346	7,333,574
Kansas	144,202	477,716	147,348	54,129	271,724	196,621	76,027	1,367,767	6,936	1,864,478	761,243	2,625,721	2,708,022
Kentucky (b)	305,592	629,759	209,288	51,874	269,601	114,680	71,703	1,652,497	7,898	2,951,002	819,472	3,770,474	3,900,326
Louisiana	562,835	580,584	444,432	244,144	417,793	486,617	95,766	2,832,161	15,843	3,702,696	1,756,344	5,459,040	5,934,316
Maryland (b)	915,730	1,856,743	1,008,411	528,429	1,222,011	159,236	117,815	5,808,375	120,327	8,421,280	2,775,295	9,196,575	9,532,468
Massachusetts (b)	736,474	2,165,092	947,576	306,396	2,246,809	243,817	147,263	6,793,427	727	5,856,046	4,123,697	9,979,743	10,469,381
Minnesota	389,408	1,508,437	592,192	1,129,230	1,012,768	63,384	144,411	4,806,830	-	4,864,939	2,441,997	7,306,906	7,589,932
Missouri	559,865	1,215,430	335,460	200,314	680,417	432,635	167,384	3,591,505	8,497	4,332,893	2,029,247	6,362,140	6,867,043
Nebraska	113,343	391,306	115,753	40,967	287,322	33,696	59,050	1,041,437	3,184	1,213,182	760,338	1,973,500	1,995,193
Nevada	257,924	1,135,902	311,913	233,186	598,273	71,748	192,509	2,801,455	3,957	2,672,540	1,588,052	4,260,592	4,296,370
New Jersey (b)	1,044,130	2,768,593	1,311,142	359,902	1,790,061	160,000	149,427	7,583,255	7,986	7,169,103	4,082,226	11,251,329	12,267,161
New Mexico	86,745	353,635	151,246	34,597	187,466	23,727	125,698	963,112	2,162	1,085,858	582,044	1,667,902	1,684,296
New York (b)	1,929,286	5,668,978	3,488,064	572,827	2,858,997	499,802	250,675	15,268,629	3,853	14,552,154	7,237,967	21,790,121	23,196,787
North Dakota	40,644	168,175	91,220	76,262	147,783	13,804	16,210	554,098	3,521	575,793	451,413	1,027,206	1,096,901
Oklahoma	216,178	627,028	216,555	82,928	237,619	40,816	129,127	1,550,251	9,928	2,118,528	1,275,751	3,394,279	3,448,264
Rhode Island	128,668	509,182	149,060	62,884	379,581	44,333	26,675	1,300,381	2,710	1,116,899	611,553	1,728,452	1,806,970
South Carolina	725,964	1,505,473	358,272	142,379	277,550	66,358	117,063	3,195,059	9,303	3,769,454	2,041,281	5,800,735	5,897,561
South Dakota	30,878	146,266	43,042	28,485	129,811	33,370	15,230	427,082	3,444	491,534	461,528	953,062	1,019,999
Tennessee (b)	397,357	1,097,065	292,167	58,354	270,486	112,955	121,656	2,350,040	6,779	3,715,919	1,634,215	5,350,134	5,446,133
Texas	1,283,285	3,594,972	1,329,610	608,682	1,387,952	446,325	1,235,366	9,886,192	27,709	11,499,518	7,016,273	18,515,791	17,862,974
Wisconsin	611,976	1,606,452	424,681	1,902,642	1,298,771	89,338	130,090	6,063,950	1,013	6,679,699	1,588,521	8,268,220	8,148,062
LICENSE STATE TOTAL	21,705,660	59,245,791	21,951,281	11,328,552	28,242,047	7,363,537	7,363,121	157,166,989	344,102	167,280,323	86,019,626	253,299,949	261,719,304
TOTAL ALL STATES	29,611,481	79,203,169	28,669,735	14,624,047	38,806,353	9,081,344	9,283,167	209,246,296	361,097	227,812,169	114,489,450	342,301,619	353,261,192

(a) In Iowa, Mississippi & Wyoming, the data represent wholesale sales from state-controlled warehouses to private retail establishments.

(b) Data incomplete for these states.

SOURCES: Control States - Data issued by the National Alcohol Beverage Control Association, Inc.; License States - Data reported by the individual states and compiled by DISCUS.

DISTILLED SPIRITS COUNCIL OF THE U.S., INC. - OCTOBER 30, 1990

NOTE

Some charts and graphs were color-coded in the original document. While it has not been possible to reproduce these items in color, their equivalent values on the black-and-white scale are often distinct enough to convey the same information as the original colors.

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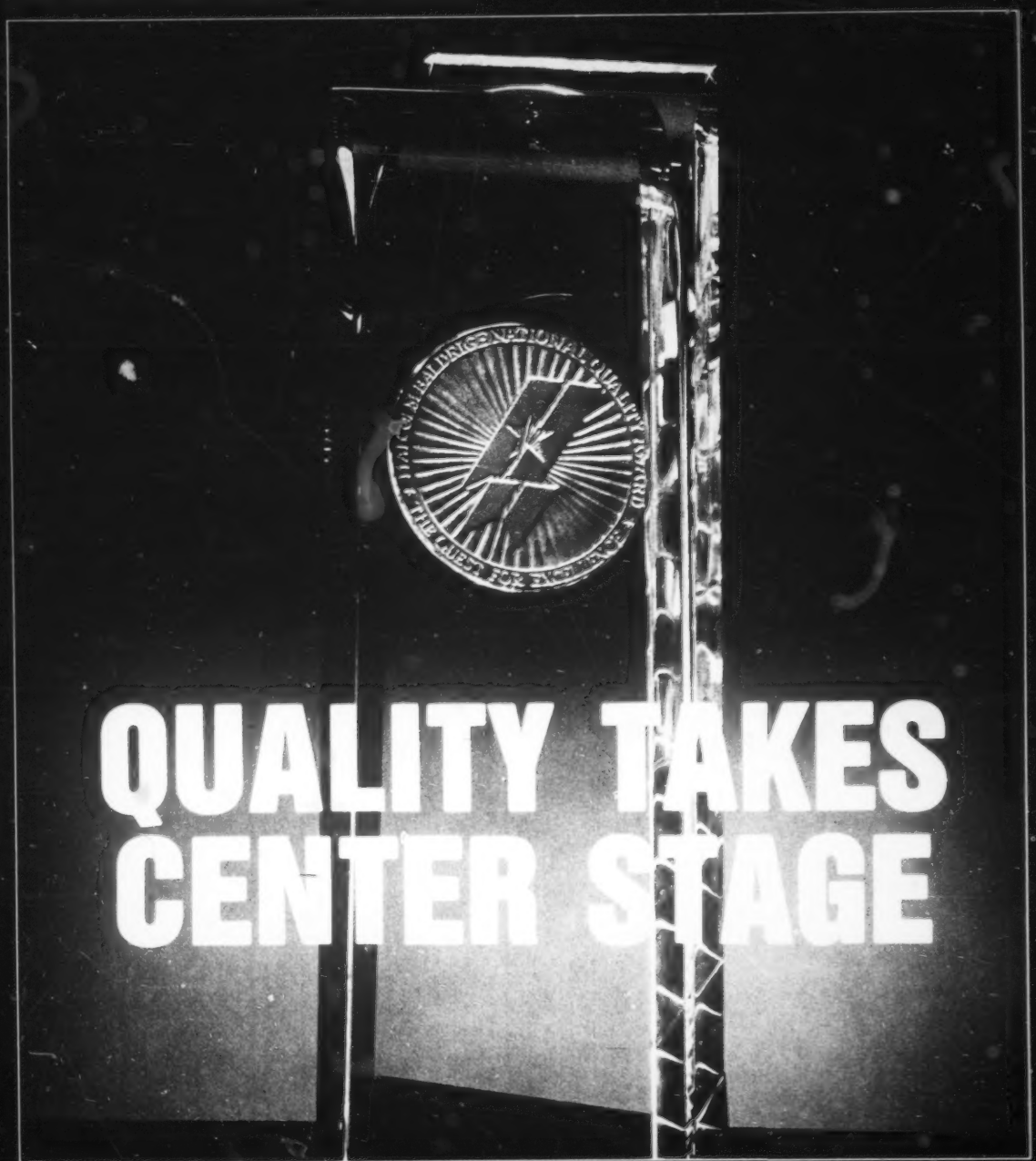
A HUEBCORE PUBLICATION

PurchasingWorld®

MANAGING THE BUSINESS OF BUYING

FEBRUARY 1991



QUALITY TAKES CENTER STAGE

- MRO: the forest or the trees?
- Express packages face problems
- Reality check on the economy
- Editorial: no freebies

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Quality has a leading role in the long-range plans of most of todays' top companies. The guiding force, in many cases, is the effort to meet the guidelines of the government's Malcolm Baldrige National Quality Award. What companies are making this effort, and how are they faring? *PurchasingWorld* examines these issues in the first of a series of articles on quality.

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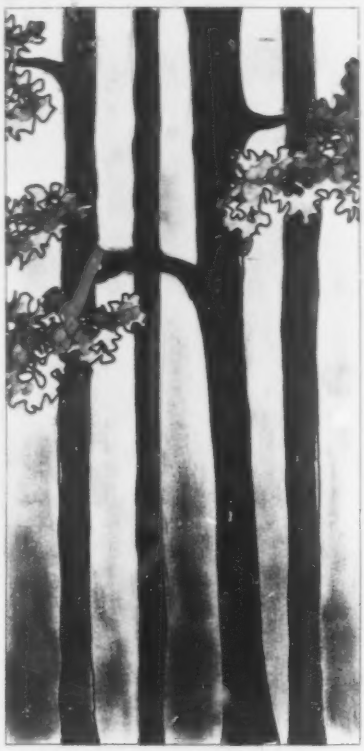
In a country renowned for team sports, somehow the team concept has had a tough time establishing itself in U.S. business. An expert examines how to remedy this situation.



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40 MRO—the forest for the trees

Ralph Bolton continues his series on a new approach to MRO buying. Among other things, streamlined businesses avoid split shipments.

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26 Upgrading computer systems

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Preserving your rights

PurchasingWorld

Changing the message

Have you ever been on the receiving end of a buzz saw? I have.

Wielding it were purchasing professionals like you and three of our columnists, Dr. Ken Killen C.P.M., Bob Janson C.P.M., and Lou DeRose. You know them for their expertise in purchasing management and negotiations and read their columns in *PurchasingWorld* magazine.

What you may not know is that all three have served on the Ethics Committee of the NAPM. Under chairman Bob Janson they have been instrumental in hammering out the new NAPM Standards and Guidelines for Ethical Purchasing Practices. *PurchasingWorld* has publicized this effort and subscribes to this Code of Ethics.

They, like other *PurchasingWorld* readers, have read me the riot act about an advertisement that promised free gifts.

For the record, *PurchasingWorld* does not subscribe to, endorse, or approve of any such practice. Nor will *PurchasingWorld* magazine accept any advertisement offering such incentives in the future. In the past, ads have not been screened for such offers. They will be in the future.

Here's a sampling from our readers about just how strong they feel about purchasing ethics:

- from Diana M. Vucasovich, purchasing manager, Ameron HC&D, "In a day and age when purchasing professionals are trying to project a 'cleaner' image of their profession, it is sad to see the 'good old boy' style of selling/purchasing still alive and well."
- from Jack D. Stoddard, vice president-corporate purchasing, Pfizer Inc., "As you are no doubt aware, the purchasing profession has long been trying to 'clean up its act,' and this type of advertising does nothing but hurt our image as a whole. I would hope that no ads of this nature would be accepted by your magazine in the future."
- from G.A. Cigala, purchasing manager, AT&T, "I find it hard to believe that a magazine which expounds the high ethical values of the NAPM would run such an ad. The ad, which of course does not contain any pricing, violates even the most basic of purchasing principles."

I know that they speak for all of you and that you join with me in congratulating them for their candor and concern.

The sad fact is that such unethical sales practices continue and meet with some success. One way to begin addressing the problem is to establish standards and guidelines for advertising (the message) in purchasing magazines and journals (the messengers). *PurchasingWorld* proposes and is willing to participate in a conference with purchasing and advertising professionals, preferably under the auspicies of NAPM, to discuss changing the message.

This could become an important first step to reduce any disparity between the ethics practiced by professional buyers and those who would sell to them.

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PW PREDICTS

Credibility/reality check

Last November (when I was still keeping the faith that the economy could escape recessionary conditions this year) a reader asked me if I actually believe what I write. My response was twofold: First, the economy is very resilient and as of last November, recession still could have been avoided; Second, I've always tried to report the good and the bad while looking beyond the obvious, keeping purchasing professionals as the focal point.

For example, last October on this page, in an article entitled *International interdiction, domestic decay,* I made two observations: *"According to latest revisions, real gross national product has grown less than 2% for five consecutive quarters now. This is a wish come true for Alan Greenspan, Chairman of the Federal Reserve, who has espoused the strategy of forcing economic growth below its potential in order to tame inflationary pressures. Unfortunately, this strategy, while theoretically excellent given no external shocks, could condemn the U.S. to a significant economic correction if Middle East developments escalate, or even worse, stagnate."*

The article concluded with, *"Unfortunately, the longer the Iraq situation persists, the greater the danger, for there are no instances in all of history where a nation has benefited economically from a prolonged military encounter while it was in progress."*

It turns out that the economy was solid heading into 1990's final quarter, as the third quarter gross national product advance now confirms. The problem in the last quarter of 1990 was that nothing offset the collective retrenchment of businesses and consumers which was severely intensified by the Middle East commotion: exports failed to reach their potential; the Fed remained too hesitant in providing enough monetary stimulus; government spending was tightened in an attempt to revive some fiscal responsibility; and not even the spirit of the holiday season was able to propel consumer spending.

Even with soaring oil prices the central bank should have been easing late last year, following two years of very restrictive monetary policy. Uncertainty due to the persistence of the Iraqi crisis wasn't the fundamental cause in our economic contraction, it just accelerated and worsened it.

Scary thing is, the current downturn may have yet to bottom-out, and numerous downside risks regarding the recession's length and unpleasantness are not only surfacing, they're intensifying.

If, in the current downturn, a substantial amount of dissaving occurs (use of savings to meet necessity purchases), consumers and businesses will be forced to build cash reserves before re-engaging in spending, depressing the startup of the eventual recovery.

The service sector is likely to be less recession-proof this time around, too. Retail inventories are high and many firms in the service sector are burdened with a great deal of debt. Moreover, the financial services industry is in the midst of structural shakeout.

Even the removal of higher oil prices and uncertainty fueled by the crisis in the Gulf are no longer enough to counteract the economic contraction we are presently engaged in, though the probability of a milder and shorter recession would be greater.

Perhaps most troublesome is our modern day liquidity trap. The Fed's monetary policy ease hasn't reduced the credit crunch being applied by commercial banks. It could be that the need for banks to raise revenues and reduce their exposure to risk will keep credit standards tight, loan availability down and the prime rate up. If the Federal Reserve fails to sufficiently stimulate aggregate demand through the availability of credit, the expected short, mild recession will almost assuredly turn into a more "meaningful" economic correction.

By John W. Sheridan
Chief Economic Editor

Rubber growth easing

Overview: World rubber consumption advanced 4.6% in the 1986-1989 time period, but that pace is expected to taper off during the next few years.

Demand: Since the last recession, world consumption of rubber has grown over 4% annually. In 1989, the total market exceeded 15.6 million metric tons (mmt), with natural and synthetic demand exceeding 5.3 and 10.2 mmt, respectively.

Developed countries remain the largest demanders of rubber, accounting for over 71% of total world consumption. The top three: United States, 3 mmt; Soviet Union, 2.6 mmt; and Japan, 1.8 mmt. In terms of growth, however, the highest rates will be witnessed in the developing countries and Eastern Europe.

Original equipment manufacturers' (OEM) tire consumption should decline as motor vehicle production slows according to car-maker's plans, with continued geographic shifting anticipated for OEMs. Overall, OEM tire demand is forecast to advance 2.6% per year through 1995.

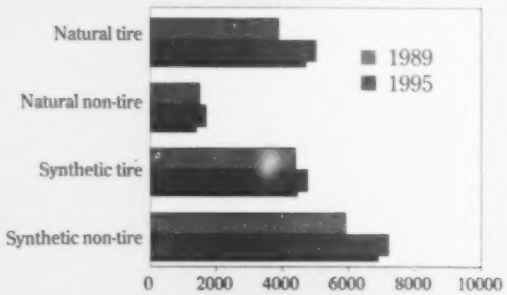
Replacement tire demand is also expected to start falling off, due to a reduction in miles driven per vehicle. Over the next five years, this market is expected to display growth of 2.5% annually.

Supply: Leading Edge Reports, Cleveland, estimates that total rubber production will grow 3.4% yearly, surpassing 18.8 mmt in 1995, with natural rubber production topping 6.7 mmt and synthetic rubber production reaching 12.1 mmt. In tires, global production could surpass 1 billion units in 1995, up from 886 million units in 1989, with the U.S. expected to remain the largest producer.

Outlook: With world tire demand forecast to increase only 2.5% per year over the next five years, global consumption of rubber should begin easing.

World rubber consumption

thousand metric tons



Source: Leading Edge Reports

NTMA down on 1991

According to the National Tooling & Machining Association (NTMA), Ft. Washington, MD, 1991 may be a very difficult year as far as the majority of tooling and machinery companies are concerned. Due to the persistence of the Middle East dilemma, and already weak domestic markets, the NTMA is now predicting negative growth in the following customer markets: motor vehicles and parts (-7%); aircraft, space vehicles and missiles (-8%); household appliances (-5%); and electronic components (-3%).

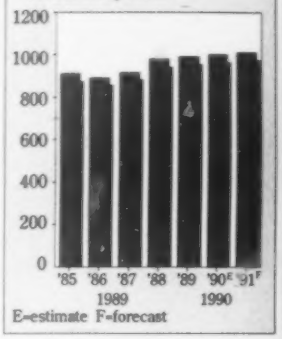
As a result, industry sales of tools, dies and fixtures are forecast by the NTMA to fall 7% this year, with molds (-5%), special machines (-9%), precision machining (-10%) and aerospace machining (-8%) also experiencing poorer performances.

Record year for coal

Last year the coal industry compiled its fourth consecutive record-breaking year. Industry observers, however, say the market will be hard pressed to duplicate 1990's production level this year. According to the National Coal Association (NCA), U.S. coal production and consumption are both estimated to have topped 1 billion tons last year, the first time in history. Behind the record levels: an increase in utility coal burned, an increase in exports, and an unusually high demand for coal in utility stockpiles. The NCA expects coal consumption to continue its ascent in 1991, increasing about 2%. Production, however, is forecast to drop 15 million tons, or roughly 1.5%, because of flat or declining demand from all but the electric utility market.

U.S. coal sales

millions of tons



Paper costs, capacity up

Profit margins in the paper industry have been feeling the squeeze since mid-1990, but things are likely to get even worse. Prices and profit margins are expected to continue the slide they began last year. The WEFA Group, Bala Cynwyd, PA, projects that strong increases in capacity during the past two years, combined with little stimulation in demand will keep operating rates trending downward in 1991.

Phone industry is hot

Overview: Telecommunications—the science and technology of communicating electronically—is continuing its progression to a more competitive market. AT&T's 1984 breakup into eight parts has ushered in a new era, with the long distance telephone market and the manufacture of communications equipment becoming extremely competitive. Even the seven "baby bells" (each of which is responsible for a section of the country's local phone network) are finding the going tougher, due to private networks and cellular telephone services.

Demand: Increased competition achieved exactly what economic theory predicted it would—lower prices. Theory also says that for a "normal" good, more is preferred to less at a lower price. Again, this is exactly what happened. Sharp price cuts have stimulated an increase in calling volume of about 12% annually since 1984, though the annual rate had fallen near 9% as of early 1990.

Supply: While more than 270 companies provide long-distance phone services, the industry remains highly concentrated. In fact, the three largest firms control 95% of the market. AT&T continues to possess more than 50% of the market, while MCI and US Sprint claim most of the rest.

Outlook: When MCI and US Sprint initially entered the market, regulation impeded AT&T's ability to react, leaving the giant charging artificially high prices because of access charges (fees—paid by long-distance customers— which subsidize local phone service). As a result, AT&T's market share has dropped from 100% in 1983 to roughly 71% currently (see chart).

Standard & Poor's expects operating incomes in this industry to grow 10% through the mid-1990s, due to high calling volume growth and increasing efficiency (all-digital networks).

Long distance phone services

*percent, share of market**

* Estimate

Electrical products still sliding

The National Electrical Manufacturers Association (NEMA) predicts that shipments of electrical products, estimated to have dropped roughly 1% in 1990, will experience a similar slide in 1991. This year, NEMA members expect exceptional growth to be displayed by extracorporeal lithotripters (50%), medical picture archiving and communications (20%), low voltage transient surge suppressors (19%), and ultrasound imaging equipment (10%). Not expected to fare so well in 1991: building wire and cable (-0.5%), switches (-2.3%), health care facility equipment (-2.5%), transformers (-2.9%), steel rigid conduit and EMT (-3.0%), tapered tubular steel structures (-5.0%), and magnet wire (-8.0%).

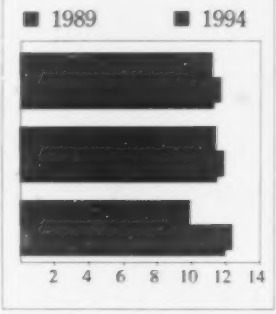
Chlor-alkali output still growing

Despite intensifying regulatory pressures on chlorine and its end uses, domestic chlor-alkali production is forecast to advance 2.1% yearly through 1994, at which time it should top 37 million tons. U.S. production of chlorine and caustic soda will advance only 1% per year during this time, but output for soda ash will jump 4.6% annually.

Behind this solid chlor-alkali production growth is the expected consumption

Chlor-alkali output

million tons



gain soda ash should display. The Freedonia Group, Cleveland, projects soda ash demand will jump 3.4% per year through 1994. And, while chlorine consumption is expected to experience only moderate yearly growth (0.5%) in the next five years, due largely to its setbacks in the pulp and paper industry, the large polyvinyl chloride market will prevent chlorine use from falling in the 1990s.

Air cargo outlook favorable

Cargo executives at the major trunk carriers (United, Delta, American, Northwest, Pan Am, TWA, and Continental) remain upbeat that, despite recessionary conditions and volatility in fuel prices, the domestic air freight business will continue to be a growth market in 1991.

In a survey by Right-O-Way, Inc., San Francisco, airline cargo managers anticipate revenue growth from 2-16% this year.

Aluminum market solid

Overview: Over 16 billion lb of aluminum ingot and mill products were shipped domestically in 1989 by the $21 billion industry. By 1994, however, that number is expected to approach 19 billion.

Demand: The dollar's slide against the Japanese yen and the German mark will, along with stronger economies overseas, allow for improvement in the U.S. aluminum trade balance. In fact, growth in the export market is forecast by the Freedonia Group, Cleveland, to exceed annual increases in domestic consumption.

In the U.S., the container and packaging sector will remain the largest end-market for aluminum ingot and mill products, advancing 2.4% per year to 4.8 billion lb in 1994. Helping to keep demand up and alternative plastic materials out of the market will be the recyclability of aluminum cans.

Consumption in the automotive and other transportation equipment market is forecast to top 3.7 billion lb in 1994, climbing 3.6% annually over the next five years. The major factors stimulating aluminum in this arena: the continued down-weighting of automobiles; aluminum's corrosion resistance, and its low weight-to-strength ratio. Sluggish activity in the building and construction sector will temper aluminum shipments to this market.

Supply: Aluminum is the second most abundant metal element in the earth's crust. In the U.S., there are approximately 15 primary aluminum producers, with the top five firms accounting for roughly 70% of the market. Due to a lack of bauxite reserves at home, a significant number of primary aluminum operations are centered overseas.

Outlook: Aluminum's dominance in the beverage container market, its growing appeal in the auto and aerospace industries, along with the development of new products (aluminum-lithium alloys) should boost domestic shipments of aluminum ingot and mill products 2.5% annually through 1994.

Aluminum product shipments
percent annual growth, 1989-1994

Source: The Freedonia Group

Textile sales to remain solid

Sales of domestic textile chemicals are forecast to remain solid during the next five years, according to the Freedonia Group. The Cleveland-based research firm reports that despite strong import competition, which will limit per-year growth in the textile and apparel industries to roughly 1%, U.S. textile chemical sales should advance nearly 3% annually through 1994, when total market sales will reach $1.7 billion. Best opportunities for chemicals in the textile market: water and soil repellants, and durable pressed resins.

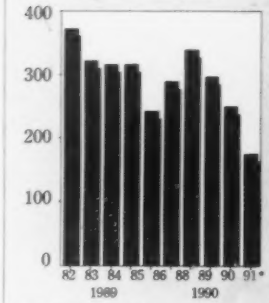
Aluminum costs moderating

In a study recently released by Anthony Bird Associates, a London-based consulting group, primary aluminum production costs advanced only 5% in the first half of 1990, which compares extremely favorably to 1989's experience, when costs jumped 15%. Since 1986, production costs have risen 39%.

Mercury market very soft

Dealers are reporting that the U.S. price for mercury has fallen into the $175-190 per 76-lb flask range, with sales said to be very weak or inactive. Meanwhile, the European market is surprising many with its lack of sales thus far this year, with prices there currently in the range of $140-150 a flask.

Mercury
dollars per 76-lb flask



*Through January

Chemical profits slide in 1990

Last year's earnings for the U.S. chemical industry didn't match the record-setting year of 1989, when after-tax profits reached $24.8 billion. Profits, while remaining strong in 1990, are estimated to have dropped into the $19-23.5 billion range.

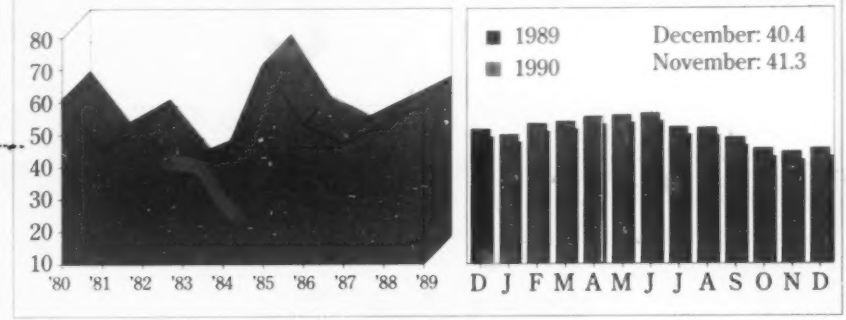
Sales remained strong in 1990, but price increases, along with rising capacity which made it difficult to pass on cost pressures, worked to dampen the industry's profit picture. Suggesting solid performance in the years to come: capital outlays last year surpassed $20 billion, while research and development topped $12 billion.

BUSINESS DATATRAK

By John Sheridan, chief economic editor

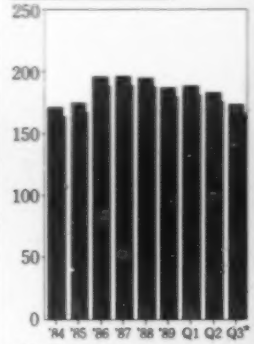
N. A. P. M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



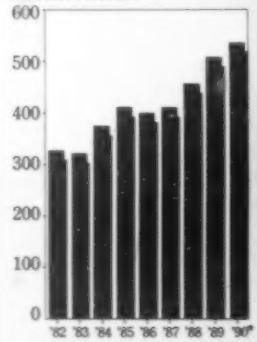
Leading Indicators

Residential investment
billions of 1982 dollars



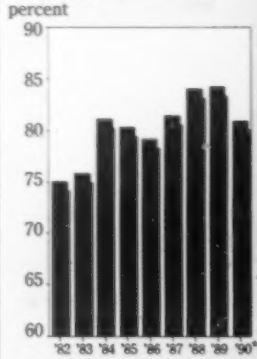
* November 1990

Capital spending
billions of dollars



* As of last survey, July

Capacity utilization
percent



* November

Source: Dept. of Commerce; Board of Governors

KEY ECONOMIC TRENDS

Destination unknown

One theory on economic activity maintains that there are overlapping business cycles, where minor waves continually gyrate around a more pronounced long-run trend.

Minor cycles are primarily determined by production plans and consumer purchases, while investment patterns play a critical role in shaping the severity and length of major cycles.

Which cycle are we currently experiencing? To answer this question adequately, analysis must include: 1) the potential strength of the economy's self-correcting forces, and 2) the environment for business investment.

In an economic downswing, self-correcting forces gradually gain strength. Traditionally, production falls faster than consumer spending or retail sales, which allows excess inventories to be worked off. On the surface, it appears that even a sharp drop-off in consumption can be absorbed, because manufacturing inventories are at historically low levels. Further downstream, however, retail inventories are a concern, implying that the consumption buffer will still be critical.

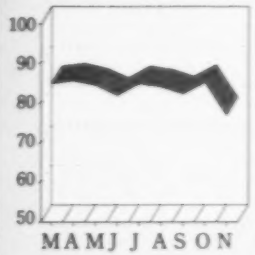
The other main stabilizing factor is the availability of cheaper credit, making investments which would have been previously unprofitable, feasible.

Thus far, these two major stabilizers haven't displayed the strength necessary to keep the current economic contraction from intensifying. Falling disposable personal income and consumer confidence, along with rising unemployment and high levels of existing debt, suggest that consumer spending has yet to stabilize. With respect to money, thus far the commercial banks haven't followed the lead of the Federal Reserve in easing credit, either.

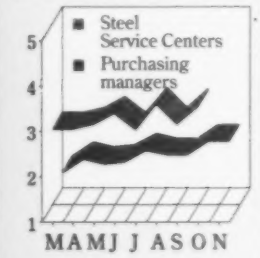
As for the investment part of this analysis, major business-cycle declines are correlated with a serious deterioration in the long-term outlook for both housing and capital spending (see charts). If business expectations about plant and equipment spending have stagnated and the construction industry remains dormant, the previously mentioned self-correcting forces will be insufficient in reviving a sustainable expansion. For when this is the case, even lower interest rates won't stimulate investment, because the demand for loanable funds, even at these low rates, doesn't exist.

Steel

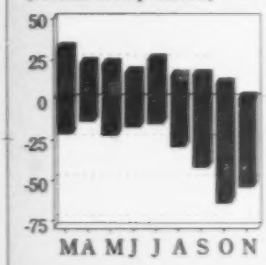
Operating rates



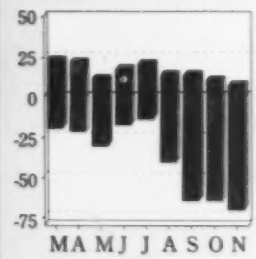
Inventories
(months supply on hand)



Demand (Steel Service Centers)
(Percent of respondents)



Demand (NAPM)
(Percent of respondents)



Source: Steel Service Center Institute
NAPM Steel Buyers Committee

One factor affecting investment is the degree of building that occurred in the preceding expansion. If overbuilding took place—and it appears that it has—demographic changes, depreciation and obsolescence will be necessary before the climate surrounding new building investment is favorable. Also important are the capital intensive needs of high-growth industries, which at this time seem only moderate.

Most economists remain optimistic that after the Middle East situation is resolved, investment will rebound quickly. With all the economies of the world in recession except for Germany and Japan, however, such optimism may be a false sense of security.

If in fact the economy is only in a mild downswing, consumer spending will stabilize by the end of the first quarter, and the demand for loanable funds will increase quickly following the conclusion of the Iraqi turmoil.

METALS SCENE

Service centers' surprise

The nation's $24 billion dollar steel service center industry surprised most everyone with its November performance, which saw the average daily shipping rate (ADSR) jump 4.1% from October levels. Advances in six of the seven product categories were recorded, with alloy up 8%, carbon tubing climbing 7.2%, plate increasing 6.5% and carbon bars moving up 6.4%.

Through the first 11 months of 1990, steel service centers ADSR performance stood 1.3% ahead of 1989's record pace. Steel Service Center Institute (SSCI) respondents are clearly uneasy about the forthcoming months. Incoming order expectations: 54% of SSCI members expect a decrease during the next three months. Members are also expressing an increasing level of concern over receivables. In fact, 39% of those polled said that customers are now paying less promptly.

Inventory jumped modestly last November, which is a trend that could prove costly if not corrected in the coming months, especially since incoming orders are expected to be waning. On a positive note, however, Andrew G. Sharkey, SSCI president, commented, "We expect that at year-end, inventories will be well below the 6.9 million-ton-level that was established at the end of 1989."

The WEFA Group recently reviewed the performance of the steel industry in previous recessions. The report stated, "An examination of recent past recession years shows steel shipments off only 16% in the milder 1980 recession, and 27% and 30% in more severe 1975 and 1982 recessions."

The Bala Cynwyd, PA, researchers are still forecasting a mild recession, lasting only through the end of this quarter. Expectations for corporate profits and industrial production, however, suggest that the slide in capital spending from steel buyers might be greater than is currently being predicted.

The stock of steel currently being held by producers is also stimulating rising concern. The latest figure of more than 2.3 months' supply on hand is significantly higher than any level which has existed since mid-1986. Between the second-half of 1986 and early 1989, producers had been operating within a 1.6-1.9 months' supply band. With the marketplace reporting a significant deterioration in new steel orders, it's no wonder buyers are confirming noticeable reductions in leadtimes.

Initial evidence indicates that reduced capital spending plans by many steel users and weakened auto builds have first quarter steel bookings off substantially.

Import prices

(Compared to domestic)

STEEL BUYERS
ABOVE 23%
SAME 37%
SLIGHTLY BELOW 37%
SUBSTANTIALLY BELOW 3%

SERVICE CENTERS (CARBON)
ABOVE 0%
SAME 73%
5-10% BELOW 25%
11-20% BELOW 2%
OVER 20% BELOW 0%

REGIONAL PERSPECTIVE

Employment deteriorates

The first quarter is traditionally a period of slow job growth, but hiring expectations this year are, even on a seasonally adjusted basis, below average. Worse yet, the employment market seems to be continuing its six-month trend of becoming more dismal.

The world's largest temporary-help firm, Manpower Inc., surveys more than 15,000 employers in 466 cities each quarter regarding hiring expectations for the permanent workforce. During its 15-year history, the Milwaukee, WI, firm's Employment Outlook Survey has been a significant indicator of labor force trends.

Of the firms interviewed, 15% intend to increase employment this quarter while 16% expect to initiate cutbacks. This continues the trend of the past year. Last year in the first quarter, employment hirings stood at 20%, while job declines registered only 12%.

According to Manpower Inc. President Mitchell S. Fromstein, the report suggests that "hiring activity is now reaching recession depths in all geographic regions except the midwest and is present in all business categories."

Regionally speaking, job deterioration is most apparent in the northeast, where net hiring is declining sharply. Workforce reductions in the northeast are also continuing, with the net hiring factor for the region measuring -9%, its lowest level since the survey began, with the current level also well below the recessionary conditions experienced in 1982. While this first-quarter data is ominous, insight suggests that employment prospects throughout the country have yet to bottom out.

Unlike the previous two recessions, when the Midwest was the hardest hit by the incoming economic contraction, thus far it is faring relatively well. A number of reasons surface: the region's prior recession experiences led it to become more diversified; but probably the most important reason for its buoyancy is the performance of its manufacturing base. Domestic manufacturers are more competitive today than they were 10 years ago, the devaluation of the dollar and pockets of export strength in Japan and Germany are a plus, and prior to the Iraqi invasion of Kuwait last summer, the manufacturing sector was displaying a modest revival.

The Midwest's net hiring factor stood at +6% in the first quarter of 1990, and while it is clearly weaker in the first quarter of 1991 (0%), it remains significantly higher than 1982's figure of -12%.

The south continues to perform admirably (+1%) in the midst of national recession, though the current environment is substantially weaker than it was just one year ago (+12%). In the West, employment opportunities are slipping fast, though its net hiring factor remains positive (+1%).

The national results by industry were highly correlated to what theory tells is associated with recessionary conditions. The steepest decline is centered in the construction segment, where 27% of the firms surveyed plan to reduce their permanent labor force. The first quarter net hiring factor of -17% hasn't reached the 1982 level of -22% yet, but its recent trend suggests that after the second quarter survey is released that no longer will be the case.

Somewhat surprising is the quick drop in job expectations in the wholesale and retail trade sector, but this may have something to do with the need to work off excess inventories. According to Manpower Inc., "the present net hiring factor of -12% indicates weakness that extends well beyond the traditional seasonal cutback of holiday extras. It is, in fact, the lowest point recorded in nine years."

Manufacturers, both durable and non-durable, estimate that hiring will fall off from last year's level, but remain above recessionary conditions this quarter.

Hiring plans
1991:Q1, percent (increase/decrease)

	National average	Midwest	West	South	Northeast
Mining	14	-25	44	11	-25
Construction	-17	-24	-5	-14	-28
Manufacturing					
durable	2	3	1	2	-2
non-durable	3	7	2	4	-1
Transportation	3	6	-3	7	-4
Wholesale	-12	-12	-13	-7	-18
Finance,	1	2	10	3	-13
Education	1	8	7	2	-12
Services	9	11	12	13	-3
Public administration	1	0	4	3	-7
All industries	-1	0	1	1	-9

CURRENT PRICES

Awaiting downward price correction

The most recent oil shock has initiated another round of domestic stagflation (stagnant output growth accompanied by rising inflation). Estimates are for fourth quarter consumer prices to display a rate of increase near 7%, with the growth rate of producer prices topping 10%.

Most of this rise is due to soaring oil prices and the uncertainty surrounding the Gulf crisis. Of concern, however, is that the core rate of inflation at the consumer price level has risen to 5.3%, roughly 1% higher than it was 12 months ago. The core rate of inflation for producer prices remains in the 3-4% range, suggesting that temporary distortions are impacting the consumer level.

While the current energy-induced inflation is expected to push the consumer price index to 5.5-6.5%, 1-2% above what it otherwise would have been in 1990. A return to normalcy in the Middle East will create a significant downward price correction. The economy should be in a state of disinflation (declining levels of inflation) by mid-year, assuming the worst-case scenario from the Iraqi commotion isn't realized.

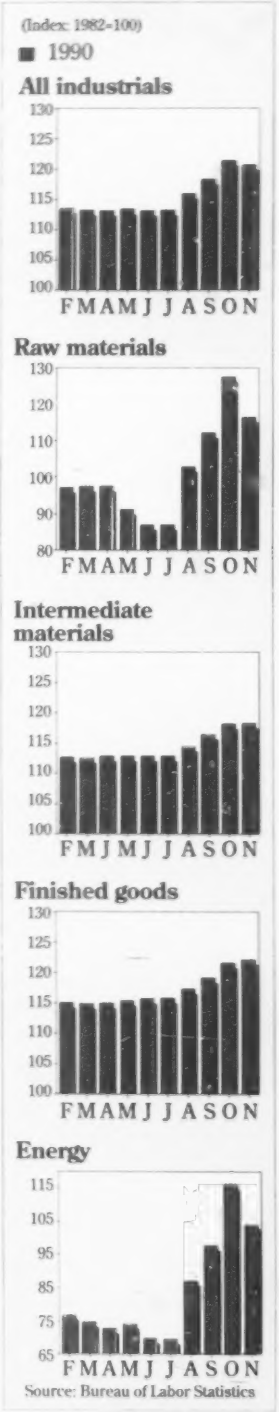
Economic consulting firms are very optimistic about the rate of inflation which will exist in the second half of 1991. Both the WEFA Group, Bala Cynwyd, PA, and Laurence H. Meyer & Associates (LHM&A), St. Louis, predict that consumer prices will fall below a 3% annual rate of growth in the last three quarters of this year. With respect to producer prices (finished goods), both firms forecast price increases of less than 1% for 1991 overall.

This month's breakdown

Index 1982=100

	Latest level	month ago	year ago
Bearings	130.9	0.2	4.1
Bolts, nuts, etc.	116.6	0.1	1.6
Chemicals, inorganic	113.0	0.3	2.2
Chemicals, organic	120.8	0.8	8.6
Concrete products	115.0	0.7	3.0
Corrugated containers	107.4	-0.1	-4.5
Cutting tools, small	114.2	0.7	1.7
Electrical lamps (bulbs)	130.7	0.0	4.9
Electronic components	118.1	0.4	-1.1
Fans and blowers	124.9	0.2	3.1
Foundry and forge products	117.9	0.3	2.3
Fuel oil (residual)	80.4	11.5	63.4
Furniture, commercial	134.6	0.1	2.9
Gasoline	98.3	0.2	58.3
Glass, flat	106.8	0.2	-2.1
Glass containers	121.0	0.0	4.6
Gypsum products	104.8	1.6	-6.0
Hand tools	136.0	0.4	5.3
Hand tools, power driven	121.8	0.2	3.4
Industrial furnaces	128.5	0.2	2.6
Integrating and measuring instruments	127.7	0.3	3.5
Internal combustion engines	121.5	0.1	4.3
Lubricating oil	136.6	8.5	23.5
Lumber millwork	130.8	0.2	1.9
Material handling equipment	115.9	0.0	2.4
Metal containers	114.0	0.0	0.8
Metal mill shapes	133.3	-1.7	-1.5
Metal tanks	114.9	0.4	2.8
Metalworking machines	124.5	0.3	3.8
Motors and generators	132.9	0.0	2.2
Motor trucks	123.7	0.0	3.9
Nonferrous metals	135.2	-3.4	-1.0
Office and store equipment	108.9	0.1	-1.6
Paperboard	135.0	0.8	-3.4
Paper boxes and shipping containers	129.5	0.2	-1.3
Paper office supplies	122.3	0.3	0.8
Paint	126.4	0.3	4.0
Plastic resins	128.6	2.8	4.0
Precision measuring tools	130.5	1.0	3.5
Pumps and compressors	120.4	0.1	3.5
Refactories	123.2	0.2	3.0
Rubber belts and belting	121.9	0.2	3.6
Scales and balances	109.4	-0.2	1.9
Switch gear	126.3	0.3	2.5
Textiles, synthetic fibers	106.6	0.3	-0.1
Textiles, gray fabrics	117.4	0.6	0.8
Tires and tubes	98.1	0.8	1.0
Transformers and power regulations	121.7	0.5	2.5
Welding equipment	129.7	0.4	4.9
Wire and cable	143.5	-2.5	-2.3

Industrial prices



Source: Bureau of Labor Statistics

PROCUREMENT

Good news/ bad news

This year will be a case of the bad news first, according to the National Association of Purchasing Management (NAPM). In their semiannual economic forecast, purchasing pros say they expect recessionary conditions to persist through mid-year.

Purchasers reported that 1) capital spending outlays were drastically lower in 1990 than their mid-year estimates; 2) their firms are operating at a significantly lower percentage of capacity (82% versus 85% in 1989 and 88% in 1988); 3) their firms are planning only a modest increase (2.2%) in capital expenditures this year; and 4) 72% of the survey participants expect prices to move 3.3% higher through the end of April, though when all respondents are factored in, the price advance is only 2%.

Not since December of 1982 have so many buyers been this negative. In answering the question regarding the 12-month outlook, 12% of the members said they were worried/pessimistic, as compared to only 2% at the time of the last semiannual economic forecast.

Buyers are optimistic about the continued strength of exports, and feel the value of the dollar relative to the yen, mark and pound will be weaker during the next 12 months.

According to the latest Report on Business, the U.S. economy is continuing its downward trajectory. The Purchasing Managers' Index sank to 40.4 percent in December, which is the lowest reading since the trough of the previous recession.

The trouble is, the current correction seems to still be gaining momentum.

New orders fell in December for the sixth consecutive month, plummeting to 38.3%.

It will be awfully difficult for the economy to reverse its current descent until this engine of growth is revived. Moreover, the production and employment figures are unlikely to improve until new orders rebound.

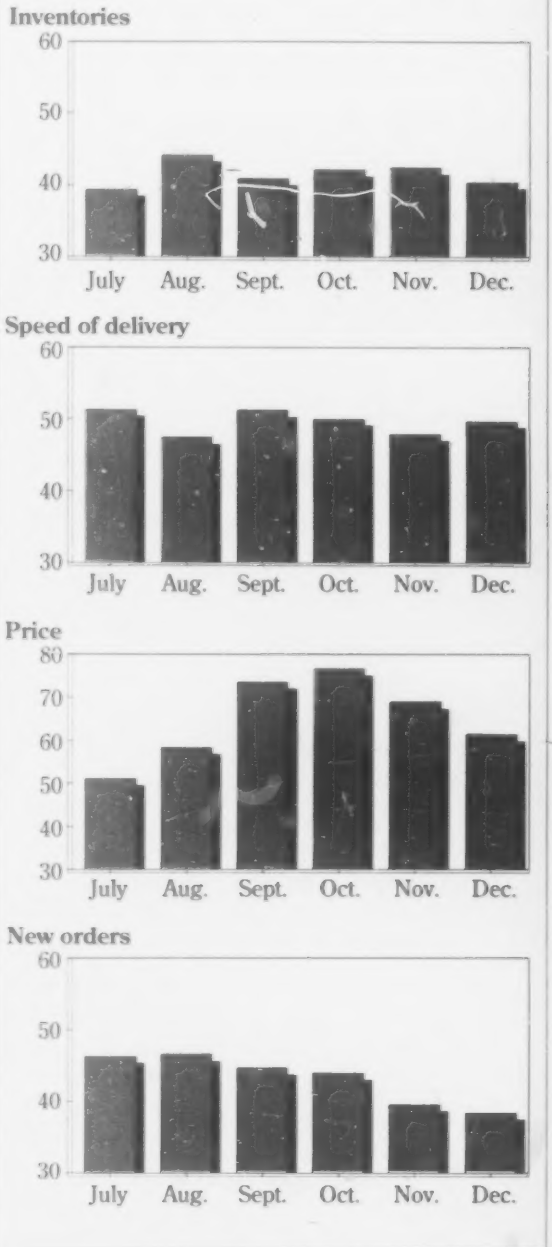
Computers in purchasing

The Universities of Lowell and Toledo, in conjunction with the purchasing management associations of Boston and Toledo, conduct a monthly survey on business conditions in their respective regions. Last year, the two reports also included a set of survey questions concerning the utilization of computers by purchasing professionals. The most recent computer study is a follow up to the original, which was compiled in

NAPM procurement trends

(Seasonally adjusted diffusion indexes)

An index where 50 is defined as the neutral level, to the extent a reading is above 50, it represents an expansionary tendency. More particularly, rising inventory, prices and new orders are seen as positive signs of economic growth. A trend towards lower deliveries is similarly interpreted.



1981.

At that time, only 53% of those answering the survey indicated that they used computers in the office. Major applications in 1981: 80% of those responding said they used a computer to maintain inventory records; 58% used it for vendor lists; 46% monitored purchase orders with it, 14% did MRP on it, while only 8% worked on it for vendor analysis and selection.

The survey results for 1990's study appear in table 1. Interestingly, while MRP I (material requirements planning) and MRP II (manufacturing resource planning) are on the verge of being standard, EDI (electronic data interchange) is off to a slow start.

Moreover, the survey reports that nearly 80% of those responding will have an MRP system in place by early 1991, and that more than 90% of the firms in manufacturing will possess such a system.

Purchasing tasks and computer usage: maintaining inventory records 87.3%, maintaining a list of vendors 89.9%, monitoring status of purchase orders 77.9%, keeping vendor performance rating 44.7%, MRP 61.8%, monitoring quotes and competitiveness 14.5%, maintaining purchase specifications 39.5%, budgeting 56.6%, and EDI 22.0%.

LATEST SPOT MARKET PRICES

	Latest price	Previous month	Year ago
FERROUS METALS			
Steel, bars, stainless, 303, cwt	188.00	188.00	179.00
Steel, bars, HR carbon, 1000 series, cwt	19.20	19.20	21.00
Steel, bars, HR carbon alloy, cwt	25.00	25.00	24.50
Steel, bars, CF carbon 12L14, cwt	34.00	34.00	34.50
Steel, plates, carbon, cwt	24.25	24.25	25.20
Steel, plates, strip mill, cwt	25.35	23.60	23.60
Steel, plates, alloy, cwt	34.05	34.05	34.55
Steel, sheets, C.R., class 1, cwt	31.90	30.65	29.65
Steel, sheets, HR, cwt	24.00	23.00	22.25
Steel, sheets, stainless, 304, cwt	124.00	124.00	124.00
Steel, strip, HR carbon, cwt	22.10	22.10	22.10
Steel, strip, CR carbon, cwt	36.18	36.18	38.30
NONFERROUS METALS			
Aluminum, unalloyed ingot, lb	0.70	0.71	0.82
Aluminum, alloyed ingot, 355, lb	0.94	0.94	0.95
Aluminum, secondary ingot, 380, 30000 lb lot	0.71	0.71	0.73
Antimony, lb, merchant	0.80	0.85	0.95
Cadmium, N.Y., dealer, lb	2.90	1.20	4.60
Copper, electrolytic wire bars, lb	1.30	1.23	1.19
Copper, cathode, full plate, lb	1.19	1.16	1.10
Gold, N.Y., troy oz	390.80	384.85	402.90
Lead, common, N.Y., lb	0.37	0.38	0.42
Magnesium, pig ingot, (99.8%), lb	1.50	1.63	1.63
Mercury, 50 fl. lots, N.Y., fl.	175.00	185.00	270.00
Molybdenum, oxide, canned, lb	2.70	3.35	3.32
Nickel, cathode, dealer, lb	3.66	3.77	5.85
Platinum, dealer, oz	408.00	418.00	494.00
Silver, N.Y., troy oz	4.12	4.10	5.20
Tin, N.Y., dealer, lb	2.50	2.63	4.38
Zinc, high grade, lb	0.63	0.70	0.82
Zinc, die casting alloy, No. 3, lb	0.78	0.78	0.74
PAPER (unit=ton)			
Uncoated book #3 offset	940.00	940.00	940.00
Uncoated bond #4, 83 bright	920.00	900.00	900.00
Watermarked bond, 20 lb sheets	1090.00	1090.00	1095.00
Unbleached kraft paper, grocery bag, 30 lb	660.00	660.00	660.00
Bleached kraft, grocery bag, 30 lb	800.00	800.00	800.00
Solid bleached kraft paperboard, folding	830.00	830.00	830.00
Kraft linerboard, 42 lb, domestic, East	360.00	370.00	410.00
Kraft linerboard, 42 lb, domestic, West	370.00	380.00	410.00
Newsprint, 30 lb, East	565.00	565.00	540.00
TEXTILES (unit=lb)			
Acrylic, open-end spun, 1/18, unbranded	1.61	1.74	1.84
Carded cotton, ring-spun, 18/1	1.56	1.56	1.61
Carded cotton, open-end spun, 18/1	1.25	1.35	1.40
Combed cotton, ring-spun, 100%, 18/1	1.71	1.75	1.85
Nylon, textured, 70/2	2.70	2.70	2.45
Polyester, 50/50% carded cotton, 30/1	1.85	1.77	1.87
Polyester, ring-spun, 100%, 16/1, unbranded	1.54	1.48	1.58
Rayon, high-wet modulus	1.46	1.48	1.30
CHEMICALS			
Acrylonitrile, tanks, lb	0.36	0.36	0.40
Ammonia, anhydrous, tankcars, ton	125.00	125.00	123.00
Benzene, gal	1.50	2.00	1.50
Caustic soda, metric ton	335.00	335.00	320.00
Cresylic acid (over 25%), tanks, lb	0.60	0.60	0.55
Formaldehyde, 37%, (12%-15% meth.), tanks, lb	0.12	0.12	0.11
Glycerine, synthetic, 96%, tanks, lb	0.76	0.76	0.79
Methanol, syn., barges, Gulf Coast, gal	0.54	0.47	0.50
Naphthalene, crude, tanks, lb	0.20	0.20	0.16
Phthalic anhydride, molten, tanks, lb	0.51	0.51	0.41
Polyethylene resin, low density, lb	0.48	0.48	0.52
Polypropylene, homo-injection, lb	0.44	0.49	0.51
Polystyrene, general purpose grade, lb	0.58	0.58	0.59
Polyvinyl chloride, pipe grade, lb	0.36	0.36	0.44
Soda ash, light 58%, 100 lb, paper bags	160.00	160.00	135.00
Styrene monomer, 99.6%, tanks, lb	0.45	0.48	0.49
Sulfur, dark, Tampa, FL, long-ton	140.00	140.00	142.00
Sulfuric acid, 66%, commercial, tanks, ton	69.89	69.89	66.86
Titanium dioxide, anatase, reg., carlots lb	0.99	0.99	0.95
Xylene, Gulf Coast, spot, barge, gal	1.05	1.50	0.95
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	325.99	323.35	345.63
Lumber 2x4 pine, mbf, cl	315.31	315.38	321.47
Plyform, 3/4", msf, cl	592.22	595.80	570.00
Plywood, 5/8", msf, cl	353.10	361.95	360.21
Cement, type 1, bulk, ton	62.10	62.10	63.88
Sand, concrete, ton, cl	6.87	6.87	7.17
Ready-mix concrete, 3000 psi/cu. yd.	49.65	49.65	48.81
Crushed stone, base course, ton, cl	6.18	6.18	5.84
Concrete blocks, sand/gravel, 8"x8"x16", per hundred	84.47	84.47	87.17
Reinforcing bars, grade 60; per cwt.	21.49	21.71	22.10
Asphalt paving AC-20, ton	122.72	122.72	108.53
Concrete sewer pipe, 24", per ft, cl	17.50	17.79	18.00
FUELS			
Crude oil (W. TX Int.), bbl	28.44	30.25	20.40
Diesel (reseller rack, Chi.), gal	0.74	0.90	0.51
Heating oil No. 2 (N.Y.), gal, spot	0.81	0.86	0.56
Heating oil No. 2 (Gulf spot), gal, spot	0.79	0.84	0.48
Fuel oil No. 6 (N.Y.), tank car contract	23.35	23.35	18.75
Gasoline (prem unlded N.Y.), gal, spot	0.73	0.80	0.78
Gasoline (reg unlded N.Y.), gal, spot	0.71	0.78	0.59
Kerosene (reseller rack, Chi.), gal	0.82	1.00	0.60
Propane, spot	0.44	0.50	0.55
SCRAP MATERIALS			
Aluminum, old sheet & cast, cl	0.43	0.42	0.43
Aluminum, mixed clips, cl	0.48	0.49	0.50
Brass, yellow solids, cl	0.62	0.62	0.57
Copper, No. 1, brass ingot makers', cl	1.02	0.97	0.93
Copper, No. 2, brass ingot makers', cl	0.93	0.87	0.84
Steel, no. 1, hvy., dlvd., Pitts., ton	105.00	105.00	99.00
Steel, no. 1, hvy., dlvd., Chi., ton	105.00	105.00	108.00
Zinc, old, smelters scrap, cl	0.30	0.30	0.35
Zinc, die cast slab, smelters scrap, cl	0.36	0.36	0.37

Sources: Metals week, American Metal Market, Engineering News-Record (20-city averages), America's Textiles International, Journal of Commerce, Chemical Marketing Reporter, Pulp and Paper Week.

*This page has been revised to better serve you.

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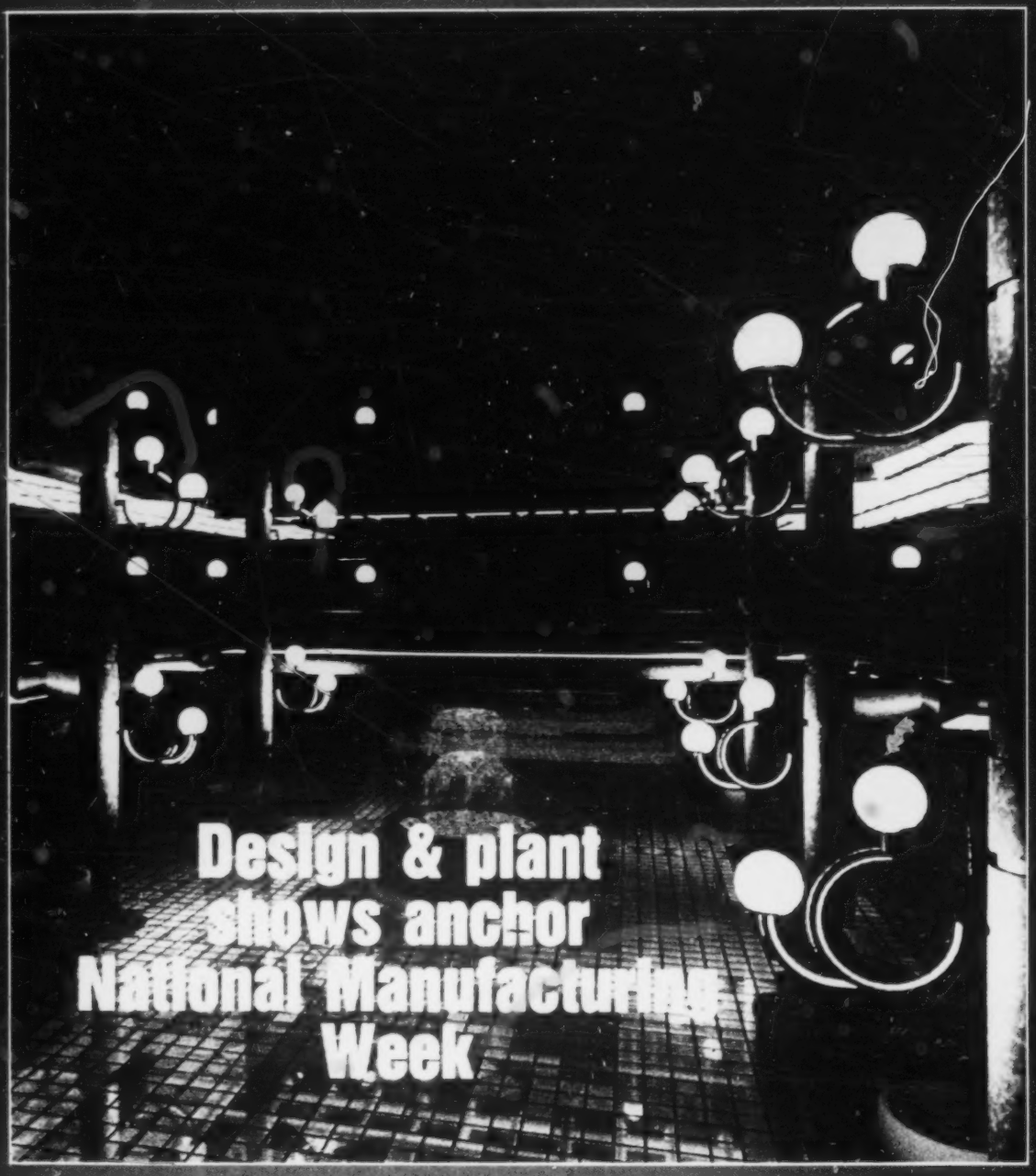
PurchasingWorld®

MANAGING THE BUSINESS OF BUYING

MARCH 1991



Design & plant shows anchor National Manufacturing Week

Crystal Ball winners • Quality focus • Strategic pricing

Sony CEO's zingers • Vehicle leasing • Recycling

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Photo quality computer-aided design as seen on this month's conver is just one example of what purchasing pros will see during National Manufacturing Week, April 8-11 in Chicago at McCormick Place.

On the cover: This stunning image was entirely computer generated with Point Line CADD and Pixar's Photorealistic RenderMan software. St. Louis Centre original design by RTKL, enhanced by Luis Morgan.

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The best forecasters in the purchasing world are highlighted in PW's forecasting competition. This year's winner—won by a postmark date and comes from Polaroid Corp., the perennial top corporate finisher.

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Ralph Bolton asks what price a buyer should expect to pay for MRO purchases. Which discount list are you quoted from—MRO customer, OEM customer, or preferred customer list? It makes a difference. Any company spending $4 million a year on its MRO requirement has the potential of reducing cost by $500,000.

42 Recycling tasks are part of the job

Assistant editor Nan Webb says that purchasing pros are witnessing a classic case of garbage inflation—too much garbage chasing too little disposal capacity.

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PurchasingWorld

Thirty

Saying goodbye to an old friend is never a pleasant task. That's the position I find myself in writing this epitaph. This is the last issue of PurchasingWorld magazine that we'll be publishing.

There is no shortage of fine business ventures that have fallen prey to the difficult economic times. As much as we would wish it otherwise, PW joins them with this issue.

We thank our friends and advertisers for their support and wish them continued success.

As in any illustrious lifetime, there is no shortage of heroes that dot the history of this magazine.

Founded in 1958 by McGraw-Hill as a weekly tabloid newspaper, PW has a tradition of association with purchasing excellence.

In 1983 Paul V. Farrell C.P.M., a winner of the N.A.P.M.'s J. Shipman Medal, became editorial director. Paul who has the unique distinction of being the former chief editor of both purchasing magazines and an N.A.P.M. executive, was the first business press editor so honored.

This past year PW columnist Dr. Ken Killen C.P.M., a professor of purchasing at Cuyahoga Community College, and a noted consultant and lecturer was named winner of the Shipman Medal.

Editor during the 1960s was Edgar A. Grunwald, who to many is the dean of American business press editors. He and Paul Farrell are arguably the best editors ever to serve the purchasing function.

The years in between have seen a succession of outstanding editors and professional columnists serving PW's readers.

During the 1970s when Purchasing Week was transformed into the monthly PurchasingWorld magazine and into the 1980s, editors included John F. O'Connor, James E. Morgan, Richard Dunn, Edward Walter, and for a brief stint before joining another of our company's publications, *Tooling & Production* magazine, Stan Modic.

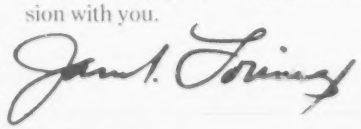
Stan was recently named the winner of the American Business Press's prestigious G.D. Crain Jr. Award for Career Editorial Achievement. Gene Beaudet who has been writing on the Business Issues has been similarly honored with the Crain Award.

Providing the economic forecasting and pricing information for PW for most of its publishing history was executive editor Robert S. Reichard. Since April of 1990, the role of chief economist has been held by John Sheridan, a bright young economist with an equally bright future in the field.

Today's columnists represent the very best in their respective fields: Dr. John E. Murray Jr., president of Duquesne University, on law; Louis DeRose on negotiations; Ralph Bolton on MRO prime sourcing; Thomas F. Dillon, C.P.M. on transportation; Robert L. Janson, C.P.M. on management; Garry Hersman on software; and Caroline Reich on buying for the office.

Special thanks are owed to all staff past and until this issue—present. Their honor roll is the masthead at the right.

Each worked hard to share our vision of the purchasing profession with you.



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PW PREDICTS

State of confusion

By John W. Sheridan
Chief Economic Editor

Economic confusion can be defined as the condition in which fundamentals are out of whack and not following their proper relationships. Clearly, this is the case today.

In an attempt to diminish this level of confusion, I went out and talked to some of the top economists our country has to offer. Probably not surprising, my survey of 17 economists (see economic advisory board below) produced more than 40 feasible scenarios, which obviously didn't solidify my frame of reference. Or ease my mind.

It was good to discover that some economists remain upbeat. In fact, James Smith, a professor at the University of North Carolina, goes so far as to say that reporters might be writing about "the recession that wasn't" in another couple of months.

The consensus, nevertheless, is forecasting (and I think hoping and praying as well) that signs of an economic recovery will be visible by mid-year.

It isn't difficult to provide sufficient rhetoric that this recession will be milder than average in its severity, for the same reason that prior to Saddam Hussein's thuggery, most economists held the view that the Fed's soft landing was relatively on course.

Even now, if one analyzes the fundamental factors which have preceded all economic downturns since the Great Depression, no reason for panic is uncovered. The yield curve (more fully explained in the DataTrak section) isn't inverted. Inventories, while of concern in the retail sector, are by historical comparison, extremely good in the manufacturing sector. The core rate of inflation is not spiraling higher. Capital spending hasn't taken the sharp plunge it traditionally has at the onset of recessions, with expectations that expenditures on new equipment will keep this sector stabilized (though I do not have unshakeable confidence in this view). Plus, corporate profits finished 1990 in the black.

Other positive factors: the greater proportion of families with two income-earners; and the fact that 30% of domestic mortgage debt is tied to variable rates. Interest rate declines should subtract roughly $7.5 billion from consumer mortgage interest payments this year, according to James Coons of Huntington National Bank.

So what's the confusion (besides that being incited from the Middle East). All recessions are forced corrections, but it is evident from the preceding paragraphs that the traditional aggravators of decline aren't significantly out of line. So, if recessions are the consequence of the need for an economy to be cleansed of bad investment, unsound debt and marginal firms, in order to pave the way for more sustainable economic growth in the future, where are the current imbalances?

The downside risks in this recession aren't observable from a "classical perspective." The service sector (representing 78% of the labor force), and especially the financial sector, are today's problem areas, currently undergoing a significant restructuring. Moreover, it's beginning to appear that the perceived (isn't perception reality?) credit crunch is aggravating a much more significant problem: a short-term lull in the outlook for long-term business investment. Are quickly deteriorating commercial bank portfolio positions creating a modern day liquidity trap? Thus far, commercial banks have been very reluctant in following the Fed's gradual lead at establishing easier credit.

So what's the confusion? Not since the Great Depression has an economic slide been so unique with respect to its downside risks.

ECONOMIC ADVISORY BOARD

- **Jean Bratton, The Timken Co.;**
- **Rosanne Cole, IBM Corp.;**
- **James Coons, Huntington National Bank;**
- **George Dagnino, Goodyear;**
- **Donald Freeman, Texas Instruments Inc.;**
- **Joseph Gross, LTV Steel;**
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- **R. Gerald Saylor, Deere & Co.;**
- **James Smith, University of North Carolina;**
- **Richard Vedder, Ohio University;**
- **William Wallace, The Boeing Co.;**
- **Robert Wendt, Bethlehem Steel Corp.**

Waste disposal critical

Overview: In 1990, the dollar value of the hazardous waste treatment and disposal market exceeded $73 billion. Services tied to this function are booming, too ($6 billion in 1990). As regulations tighten and more debris is classified as hazardous, firms that cannot afford hazardous waste disposal and treatment equipment will demand even more outside assistance.

Demand: Last year, more than 700,000 industrial generators created an estimated 345 million tons of hazardous waste, according to Leading Edge Reports. The Cleveland-based researchers report that chemical and allied products manufacturers were responsible for generating roughly 170 million tons of this waste (see chart).

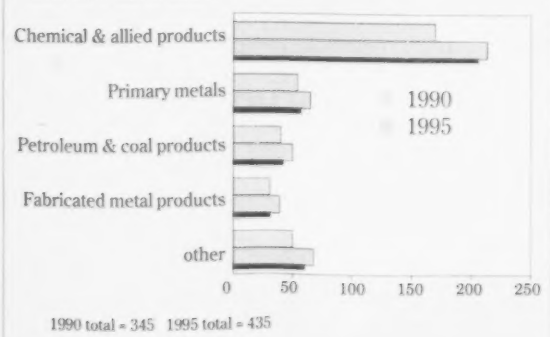
Supply: More than 10,000 public and private firms exist in support of this problem, providing specialized services in engineering, testing, insurance, transportation and other technical activities. In fact, since 1984, revenues in this industry have soared over 21% annually, with transportation the hottest component of the services segment.

Land disposal still handles the majority of hazardous debris (75%); In 1995, the cost of hazardous waste land disposal is forecast to reach $203 per ton. Incineration is becoming the most-desired way of dealing with hazardous waste, with yearly growth above 15% expected through 1995.

Outlook: Treatment and recycling are projected to grow 17% annually during the 1990-1995 period. In 1990, 25 million tons of hazardous waste was recycled, while another 20 million tons got treated either chemically or biologically. Clearly, this leaves an enormous amount of "known and reported" hazardous material to be dealt with. Of the estimated 59,600 hazardous waste sites, only 1,200 are on the Superfund's National Priorities List. Many more sites will need attention in the years ahead.

Generating hazardous waste

million metric tons



1990 total = 345 1995 total = 435

R&D slowing, but still growing

The annual Battelle research and development (R&D) forecast estimates slowing, but still growing expenditures this year, of about 3.5%, to $155.2 billion. In inflation-adjusted terms, however, the rate of investment growth slows to only 1%, which is significantly below the 4% average that was witnessed during the 1980s.

Who's going to be doing this research? According to Battelle, Columbus, OH, the breakdown is as follows: industry, 71.5%; federal government laboratories, 11.3%; academic institutions, 14.4%; and nonprofit organizations 2.8%. And who's paying for the research? The two big funders are industry, ($76 billion) and the federal government, ($72 billion.)

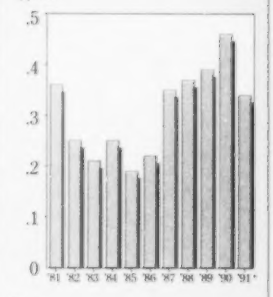
Further softening expected for lead

Lead prices are one of the many commodities retreating as recession heats up. The WEFA Group boldly predicts that prices here will slide through the third quarter, falling near the 25¢/lb mark. While robust car-building demands in Europe will be a positive factor in global demand, weakening business activity and new regulations discouraging the use of lead in the U.S. will keep this nonferrous metal market soft.

Total production is expected to jump over 4% in 1991, with mine capacity expanding 2.5%, which could push the lead market into a surplus of approximately 50,000 tons. Unless demand soars, prices will be hard pressed to average more than 30¢/lb this year.

Lead

$/lb



*Recent

World textile markets mixed

Growth in per capita global textile consumption has averaged 3.6% annually since 1960. While demand growth in the seventies was stagnant, most developed countries increased consumption in the 1960s and 1980s. Julia Blake, a leading textile analyst at Barclays, London, forecasts world growth of 3.1% per year during the 1990s. A short-term overabundance in supply is expected to depress prices for the next year or two in the Asia/Pacific region. In the U.S., however, concern is being raised over tightening domestic supplies of cotton for 1991.

'91 labor challenges

This year won't be without its labor negotiation challenges for management and laborers. Major agreements (covering 1,000 workers or more) will reopen or expire for 2.8 million workers in 1991: 1.3 million state and local government employees; and 1.5 million workers in the private sector.

Collective government agreements will affect roughly 2.6 million people in 1991, implying that this year's bargaining will represent more than half of all workers under major government agreements. Of the 1.3 million governmental workers affected, 612,000 represent local government employees.

In the private sector, 1991's bargaining calendar represents slightly more than one-fourth of the industry's 5.9 million workers under major agreements. Contracts come up for 570,000 manufacturing employees during the next 12 months. Nonmanufacturing negotiations will impact 901,000 laborers. The primary industries affected: construction (230,000); wholesale and retail trade (195,000); trucking (187,000); and mining (65,000).

Due to the uncertainty from the commotion in the Gulf, rising unemployment, moderating inflation rates and stagnating business investment here at home, along with the general unwinding of business activity both domestically and overseas, wage hikes similar to those of the past few years will be very difficult for workers to bring off.

For a more detailed analysis of 1991 labor contracts, see the January issue of the *Monthly Labor Review*, prepared by the Bureau of Labor Statistics, U.S. Department of Labor.

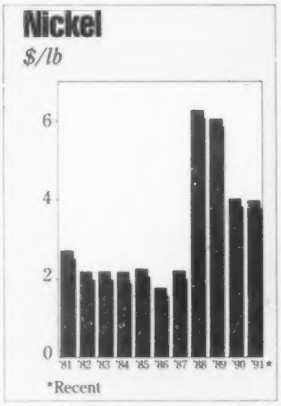
Industry	Agreements	Workers
Building construction	27	81,315
Nonbuilding construction	30	65,030
Special trade construction	42	83,700
Food and kindred products	16	64,020
Apparel	19	138,000
Lumber and wood products	2	4,150
Furniture and fixtures	2	2,100
Paper and allied products	4	4,940
Printing and publishing	4	6,500
Chemicals and allied products	9	13,730
Rubber and plastic products	8	35,320
Stone, clay, glass and concrete	3	4,300
Primary metals	3	24,600
Fabricated metals	3	4,575
Industrial and commercial machinery	7	39,300
Electronic and electrical equipment	13	118,650
Transportation equipment	19	80,416
Retail, food	34	122,950
Electric, gas and sanitary	24	65,211
Finance, insurance and real estate	6	53,000
Services	20	51,348

Machine tool exports outstanding

While the data for total 1990 shipments has yet to be compiled, it is safe to say that 1990 was an outstanding year for U.S. machine tool exports. The record for domestic exports to West Germany, which was established in 1989 at $61.6 million, was already surpassed in October of 1990 ($66.8 million). While sales to Western European countries are better than ever, so are sales to Australia, Belgium, Chile, Greece, India, Italy, and Japan.

Nickel volatility in the past

The past few years have witnessed large swings in the price of nickel, but overriding demand fundamentals suggest that such volatility is behind us. After surging to over $8/lb in 1989, 1990 saw prices fall to $2.85/lb in February, soar to near $6/lb in the summer, then retrench into the low $4/lb range by year-end. Although stainless steel demand (which accounts for 60% of nickel needs) was stagnant in the U.S. last year, German and Japanese consumption held strong. Unfortunately, the backlash of recession in the U.S. will stimulate a plunge of at least 2.5% in global stainless steel demand this year, with nickel consumption falling by a similar amount. With supply increasing and demand forecast to be dormant through most of the year, current 1991 price projections are for nickel to fall toward the $3.50 level.



Investment plans being trimmed

After increasing investment 5.2% in 1990 and 11.4% in 1989, businesses are currently planning to invest only an additional 2.4% this year. Worse yet, further scaling back on plant and equipment (P&E) expenditures is likely.

In the Commerce Department's latest survey, manufacturing industries are expecting to up 1991 spending by 0.7%, significantly less than last year's 4.6% hike. Planned investment for durable goods industries is expected to rise 0.8% in 1991, while non-durable goods industries plan a 1.8% advance. Nonmanufacturers, meanwhile, are planning to increase P&E spending 3.4% this year.

Auto sales sinking

Overview: Entering 1991, U.S. car companies are searching for the formula to turnaround the slide in sales witnessed in 1989 and 1990. With the economy in the midst of recession, further sinking of Big Three (GM, Ford and Chrysler) auto sales is expected again this year.

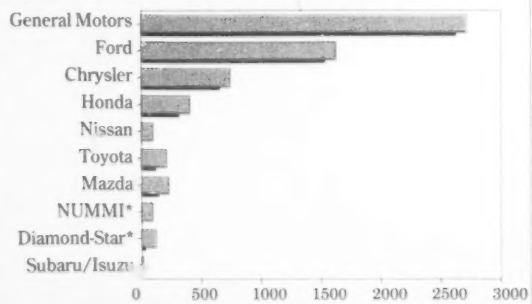
Demand: Even assuming the economy shows signs of revival by mid-year, total vehicle sales are forecast to fall 8%, following the nearly 5% plunge of 1990. Passenger car sales aren't expected to do much better, dropping 7% this year. Positive trends helping to support new sales: an increase in the 25-44 year-old age group; the lower age at which cars are scrapped; quality and style enhancements which more quickly obsolete previous models; the over capacity of production facilities; and extreme competition, which should keep auto prices very favorable in relation to the general level of consumer prices.

Supply: Foreign manufacturers have located production facilities domestically to circumvent or head off trade restrictions, while also eliminating the worries brought by the volatile foreign exchange market. Currently, the Japanese operate seven North American plants. The share of market accounted for by transplants (plants owned by foreign manufacturers) has soared from 3% in 1986 to over 15% currently, more than offsetting the declining market share of non-Canadian imports (falling since 1987).

Outlook: A large increase in fleet purchases (rental agencies, corporate fleets and leased vehicles) provided a temporary boost to sales in the fourth quarter of 1990. Production cuts have been made by the Big Three to come more in line with their market shares. After falling roughly 11% in 1990, domestic passenger car production is expected to sink again this year, with optimists predicting a 5% fall, while the consensus is forecasting a 10% slide.

U.S. passenger car production

thousands of units



Diamond-Star = Mitsubishi joint venture with Chrysler
NUMMI = Toyota joint venture with GM

U.S. linerboard prices tumbling

The recession has hit the U.S. containerboard industry. After absorbing the storm through most of last year, linerboard and medium prices are beginning to retreat. Inventories are said to be climbing, and transaction prices for 42-lb linerboard have reportedly tumbled to $350/ton, with discounting into the $300/ton range, especially in the Northeast. With capacity rising, demand weakening and operating rates falling, no price firming is expected until late 1991 or early 1992.

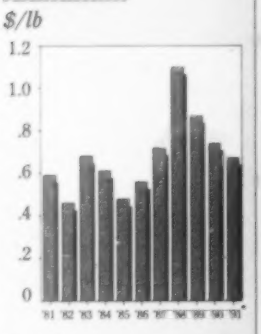
Aluminum prices holding steady

But for how long? Operating incomes at America's three largest aluminum producers dropped sharply last year after the industry's record-setting performance of 1989. William O. Bourke, Reynolds Metals' chief executive officer, thinks global demand will advance marginally in 1991, as Europe and Japan hold the key to shipments. In fact, Europe has become the world's number one consumer of primary aluminum.

Shipments in the U.S. fell about 5% in 1990, while rising 2% in Europe and nearly 6% in Japan. If Bourke's prediction on worldwide shipment growth of 2% for 1991 is to come true, strong numbers overseas will be required. Prices are now at their lowest level (67¢/lb) in over a year, but should begin to stabilize in the 65-70¢/lb range. With scheduled net smelter capacity set to increase 2% this year, and no significant supply disruptions present, the market will probably move in unison with U.S. demand, which isn't likely to rebound until the third quarter.

Aluminum

$/lb



*Recent

Large variance in global gas costs

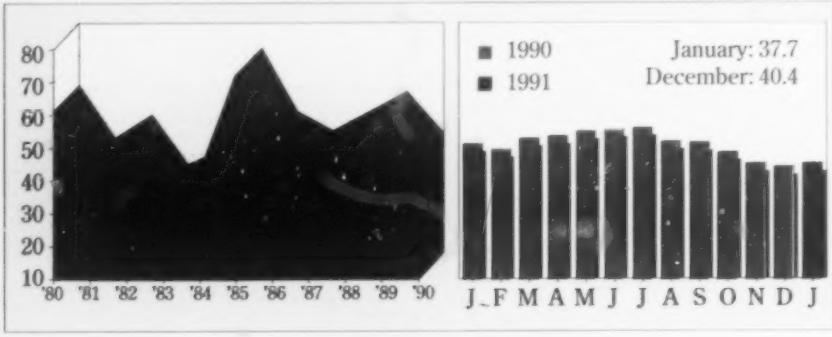
No doubt Saddam's thuggery, which incited soaring prices at the pump last year, forced major spending reappropriations However, prices in America are significantly lower than prices in other major countries. On October 15, 1990, per-gallon gas prices (and tax burdens in parentheses) around the world were as follows: U.S., $1.34(25¢); Japan, $3.89($1.49); Germany, $3.52($1.92); United Kingdom, $3.67($2.00); France, $4.37($2.95); and Italy, $5.21($3.53).

BUSINESS DATATRAK

By John Sheridan, chief economic editor

N. A. P. M. business barometer

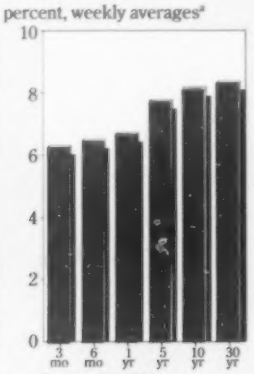
Based on five indicators (employment, inventories, new orders, production, vendor performance)



Leading indicators

Yield curve

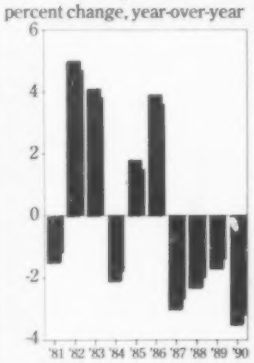
percent, weekly averages[a]



a = January 11, 1991

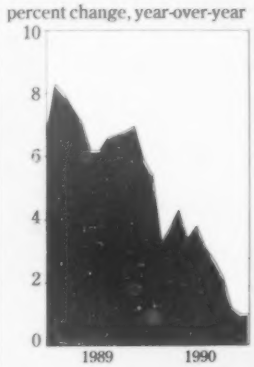
Domestic liquidity

percent change, year-over-year



Business loans

percent change, year-over-year



Source: Dept. of Commerce; Board of Governors

KEY ECONOMIC TRENDS

Accuracy versus optimism

Voltaire is given credit for saying, "Optimism is that mania for believing all is well even when things are going badly." Such may be the case today, in terms of the current recession being less severe than normal. Certainly the consensus forecast of a short and mild recession is not unreasonable, especially when considering manufacturing's lean level of inventories.

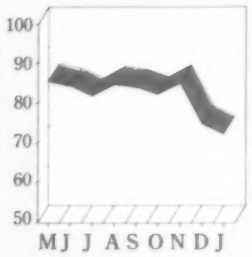
James Smith of the University of North Carolina will also tell you that in all but one of the 15 recessions since the Federal Reserve was established in 1913, the yield curve became inverted prior to its onset. This means that the rate of interest on short-term securities was greater than the interest being paid on longer-term (10- and 30-year) securities. Such inversion usually signals a tightening of credit by the Fed to neutralize rising inflation. As the chart reports, this is not presently the case, which indicates that the Fed can reduce short-term interest rates and revive aggregate demand much more quickly than it could in previous downturns, if it so desires.

While on the surface it appears as if the Fed is moving in that direction, other indicators of monetary policy suggest more caution. For instance, take the ratio of the monetary aggregate M2 to gross national product. This proxy of domestic liquidity has been in a state of decline for four years now. When output growth outpaces increases in the money supply, deflation and recession traditionally result. After the 1981 drop in domestic liquidity and subsequent slowing of business activity, liquidity advanced sharply in 1982 and 1983. Likewise, when the economy slowed in 1986, liquidity shot up solidly, stimulating continued growth. It's safe to assume that any sustainable rebound in business activity this time around will also need to be correlated with a turnaround in domestic liquidity.

Commercial and industrial loans data also flash warning. While the chart represents the loan market's equilibrium position, implying that both supply and demand factors are working to determine the level of credit that commercial banks are providing business borrowers, the persistence of the downward slope is clear. Whether it is because the demand for loans by business leaders has dropped (implying that the long-

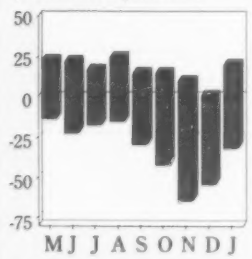
Steel

Operating rates

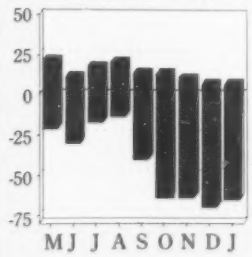


Inventories
(months supply on hand)

Demand (Steel Service Centers)
(Percent of respondents)



Demand (NAPM)
(Percent of respondents)



Source: Steel Service Center Institute
NAPM Steel Buyers Committee

term outlook for business investment is worsening) or the fact that the portfolio positions of commercial banks are forcing them to significantly cut back lending, the end result is the same.

Loan growth must rebound if this correction is to be short and mild.

Also tempering optimism: the fact that manufacturing performance is a coincidental indicator, not leading. The aftershocks of recession are likely to begin placing additional strain on this sector, resulting in new cutbacks in consumer and business spending.

How well manufacturing absorbs recession's aftershock will be the critical factor in deciding whether or not the current correction is to be milder than the historical "norm."

METALS SCENE

Steel sector under pressure

Last year, profound changes in the consumer and business sectors began to impact the steel market. This year, those same changes will not only continue, they'll intensify, placing even greater strain on industry operating rates and profits.

While shipments in 1990 probably topped the 1989 record of 84.3 million tons, industry profits clearly dropped. Despite stronger sales and improved production efficiencies, profit margins got squeezed last year because of lower selling prices, higher labor and material costs, and equipment downtime.

Inland Steel believes that increased industry shipments to heavy industrial markets made up for the retrenchment in consumer markets last year. But, since manufacturing is a coincidental indicator, this sector's slowing isn't likely to be clearly noticeable until late in the first quarter of 1991, suggesting the slowdown by the industrial market has yet to be fully felt.

New plant and equipment spending remained strong in 1990, and Inland feels that a resolution to the Gulf conflict will stimulate a rebound in business investment, especially for new productivity-enhancing equipment. Inland is especially optimistic about investments by the petroleum and electric utility sectors, because of their need to comply with the new Clean Air Act. High levels of investment are also anticipated from firms in the chemical and paper markets, once the uncertainty from the Middle East is removed.

With respect to specific markets, Inland's 1991 expectations regarding steel demand are as follows: construction, down 1.3 million tons; oil and gas markets, up 700,000 tons; equipment and producer markets, flat to down slightly; and consumer markets, down 700,000 tons. Shipments to major appliance manufacturers are also expected to drop. Demand from shipbuilders, agricultural and rail buyers, however, is forecast to remain relatively healthy.

Inland's capital spending outlook is not unreasonable, but I would suggest caution in placing too much hope on strong business investment this year. The commotion in the Gulf and the uncertainty it stimulates is a dampening factor on current economic activity, but at least one study indicates enough uncertainty will remain even following the conclusion of the war, largely due to rising unemployment.

Though there is not a tremendous amount of new capacity scheduled for 1991, the total production potential of 119.1 million tons is substantially greater than domestic shipment forecasts, which range between 76-79 million tons. Clearly, prices should remain in a depressed state for much, if not all, of 1991.

Import prices
(Compared to domestic)

STEEL BUYERS
ABOVE 25%
SAME 32%
SLIGHTLY BELOW 43%
SUBSTANTIALLY BELOW 0%
SERVICE CENTERS (CARBONS)
ABOVE 4%
SAME 70%
5-10% BELOW 21%
11-20% BELOW 5%
OVER 20% BELOW 0%

REGIONAL PERSPECTIVE

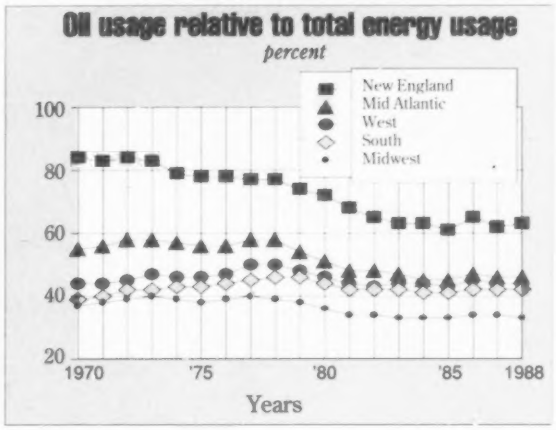
Oil's impact

Many believe that it was the run up in oil prices which pushed the Fed's slow-growth economy into recession. Oil's pervasive impact on production, packaging and distribution costs, it is argued, applied a negative drag on the economy which, due to the lagged effects of monetary policy, the Fed could not compensate for fast enough. Nevertheless, according to a recent *Economic Commentary* at the Federal Reserve Bank of Cleveland, "Although rising oil prices have a net negative impact on the U.S. economy, certain regions and business sectors suffer disproportionately, while others actually benefit."

The study evaluated oil's regional importance by evaluating three factors: 1) oil's share of firms' total costs, 2) the ease with which firms can substitute other inputs for oil, and 3) consumers' ability to switch to other products if a firm attempts to raise its prices.

In the United States, oil usage by sector in 1989 was as follows: the transportation industry accounted for 63% of all oil used; industrial activity commanded 25%; the residential sector claimed 4.7%; and the commercial and electric utility sectors used 7.7%.

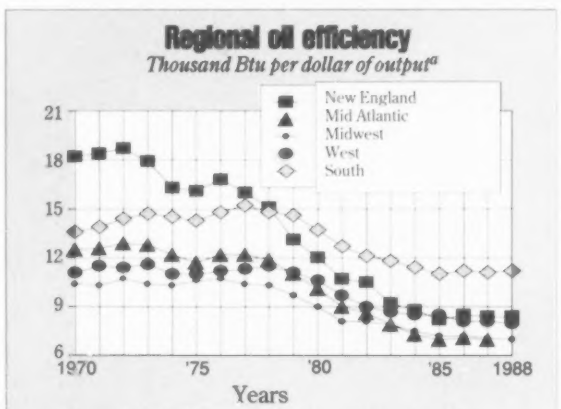
By comparing each region's sector mix and efficiency in using oil, the authors uncovered some interesting statistics. New England's use of oil relative to total energy usage is substantially greater than any other region, followed by the Mid-Atlantic, West, South and Midwest.



In the South, a much higher share of oil is consumed in industrial production, when compared with the rest of the country. The fact that some southern states produce oil might have induced many petroleum-intensive industries to gravitate there, and is one reason why this area claims the nation's highest share of oil consumed by the industrial sector.

New England, on the other hand, has the highest share of oil consumption being claimed by the residential and electric utility sectors. In the West, transportation accounts for a greater share of oil usage than is the case for the nation overall. The Midwest, meanwhile, generally mirrors the economy in oil consumption patterns.

Three-fourths of the country's total oil producing facilities are located in four states—Alaska, Texas, Louisiana and California—which is good news for them, because higher prices translates into larger revenues. It was even suggested for Alaska, where oil revenues are a substantial share of gross state product (GSP), that the entire state may emerge as a net gainer.



a: Measured in 1982 dollars using real gross state product data.
Source: Energy Information Administration, State Energy Data Report.

By analyzing the impact of oil price movements on GSPs, the states most adversely and positively affected by the current commotion in the Persian Gulf were discovered. Only seven states are expected to witness a long-run net gain because of higher oil prices: Alaska, Wyoming, Louisiana, Oklahoma, New Mexico, Texas, and West Virginia (a leading coal producer). The ten hit hardest in the long-run (from least to worst): Oregon, Georgia, Florida, Massachusetts, Hawaii, South Dakota, Maryland, Rhode Island, Michigan, and Arizona.

Since the early 1970s, there have been significant reductions in the usage of oil by every region of the country, suggesting two things: 1) energy conservation continues, and 2) the country is more immune to oil shocks today than it was 20 years ago. It is clear, however, that volatility in oil prices impacts regions differently, and that oil costs will play an important role in the determination of regional business activity during the near future.

CURRENT PRICES

Inflation fears should hibernate

While oil-induced price run ups remain a possibility, the U.S. inflation rate is clearly trending lower.

The producer price index (PPI), excluding food and energy, has been displaying an annual growth rate of roughly 3.5% since last summer. In fact, this year's average rate of 3.5% is significantly lower than 1989's level of 4.2%. Even better news is that four reasons suggest disinflation (falling levels of inflation) well into the third quarter of 1991.

Here's why: 1) the PPI is a measure of prices received by producers in the first commercial transaction. Because it is a stage-of-processing price index (upstream on the supply side), it is often interpreted as an indicator of inflation, via the transmission process along the value chain; 2) there is no mistaking that commodity prices, without oil, are trending lower; 3) the recession will push unemployment near 7.5%, forcing consumer demand to also enter a period of hibernation through at least mid-year; and 4) even when the economy does begin its revival, the recovery will be characterized by sub-par growth, and risk of renewed recession (remember the 1980, 1982 experience?).

As long as Alan Greenspan serves as Chairman of the Federal Reserve, the central bank will be quietly moving toward zero inflation (this is an optimal goal as long as the proper measurement of inflation is found).

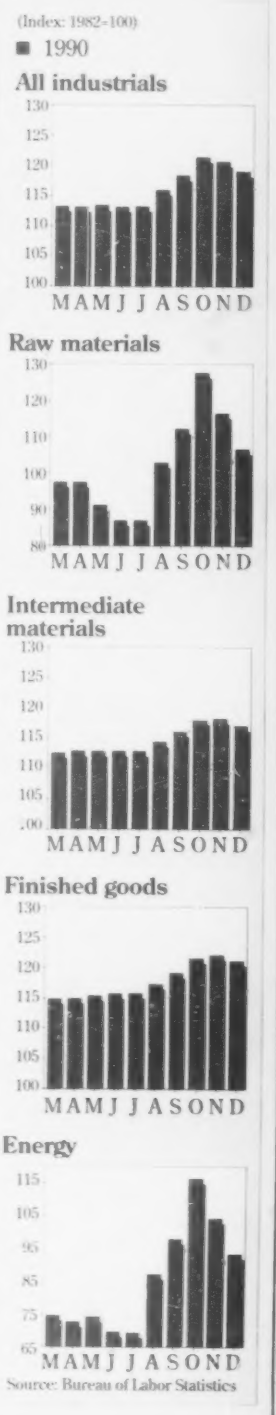
This ideology of zero inflation is why the Fed has, to date, only used a course of gradualism to fight the current recession—and also why the Fed will maintain a very low growth ceiling on our next expansion flight.

This month's breakdown

Index 1982=100

	Latest level	month ago	year ago
Bearings	131.1	0.2	4.3
Bolts, nuts, etc.	117.0	0.3	1.9
Chemicals, inorganic	112.7	-0.3	2.0
Chemicals, organic	118.4	-2.0	5.7
Concrete products	115.2	0.2	2.9
Corrugated containers	107.1	-0.3	-4.6
Cutting tools, small	114.3	0.1	1.6
Electrical lamps (bulbs)	131.5	0.6	0.9
Electronic components	118.4	0.3	-0.3
Fans and blowers	124.9	0.0	3.1
Foundry and forge products	118.1	0.2	2.5
Fuel oil (residual)	73.7	-8.3	42.0
Furniture, commercial	134.7	0.1	3.0
Gasoline	88.0	-10.5	45.2
Glass, flat	106.7	-0.1	-2.2
Glass containers	121.0	0.0	4.6
Gypsum products	103.4	-1.3	-5.5
Hand tools	137.3	1.0	5.3
Hand tools, power driven	122.1	0.2	2.9
Industrial furnaces	129.4	0.7	3.1
Integrating and measuring instruments	128.4	0.5	3.8
Internal combustion engines	121.8	0.2	3.8
Lubricating oil	137.5	0.7	23.2
Lumber millwork	131.0	0.2	1.8
Material handling equipment	116.0	0.1	2.3
Metal containers	114.1	0.1	1.3
Metal mill shapes	129.7	-1.9	-0.9
Metal tanks	114.5	-0.3	2.5
Metalworking machines	124.8	0.2	3.9
Motors and generators	133.3	0.3	2.1
Motor trucks	123.2	-0.4	3.7
Nonferrous metals	130.6	-3.4	-0.4
Office and store equipment	109.1	0.2	1.3
Paperboard	133.9	-0.8	4.4
Paper boxes and shipping containers	129.4	-0.1	1.3
Paper office supplies	122.3	0.0	1.1
Paint	126.7	0.2	3.9
Plastic resins	131.2	2.0	6.4
Precision measuring tools	132.3	1.4	5.6
Pumps and compressors	121.1	0.6	4.0
Refactories	123.4	0.2	3.2
Rubber belts and belting	121.6	-0.2	4.3
Scales and balances	109.5	0.1	1.5
Switch gear	126.4	0.2	4.5
Textiles, synthetic fibers	107.8	1.1	0.8
Textiles, gray fabrics	118.0	0.5	1.1
Tires and tubes	97.8	-0.3	0.7
Transformers and power regulations	122.9	1.0	3.7
Welding equipment	129.9	0.2	5.1
Wire and cable	140.9	-1.9	-1.2

Industrial prices



Source: Bureau of Labor Statistics

PROCUREMENT

Dive continues

January's Purchasing Managers' Index (PMI) confirmed what many of us have feared: with the exception of the inventory argument, it is hard to make a strong case why this recession will be less painful in terms of its length and severity than historical norm. The PMI fell for the fourth straight month in January, to 37.7. Even worse, the first reading of 1991 was significantly lower than 1990's ending mark, suggesting the economy's slide intensified.

With new orders still wretchedly poor (35.7 in January), it's hard to be optimistic. They need to stabilize and turn upward, because until they do, our current economic contraction will persist.

Production worsened for the sixth straight month in January, with the outlook dim for any near-term improvement. Clearly manufacturing is a coincidental indicator in this recession. With the aftershocks of the economy's initial fall now impacting this sector's new orders, operating rates will do well simply to level off.

The good news, however, is that the energy-induced price run-up (at least the one due to Iraq's August 2 invasion) seems to have worked its way through the system. Of course, the stagnating of demand has obviously helped.

Commodities still reported to be displaying upward price pressures: steel (reports mixed), acetic acid, caustic soda, soda ash, methyl ethyl ketone (MEK), sulfur, pigments, plastic resins, cotton fabric, petrochemicals, glass, adhesives, rubber, and polyethylene.

Inventory patterns

Expectations are that this will be a milder than normal recession, primarily because manufacturing inventories appear so well-managed. As the current economic correction begins to play out, inventory-to-sales (I/S) ratios will be an important indicator of health, both for the economy and individual firms, because they measure supply (inventory) relative to demand (sales).

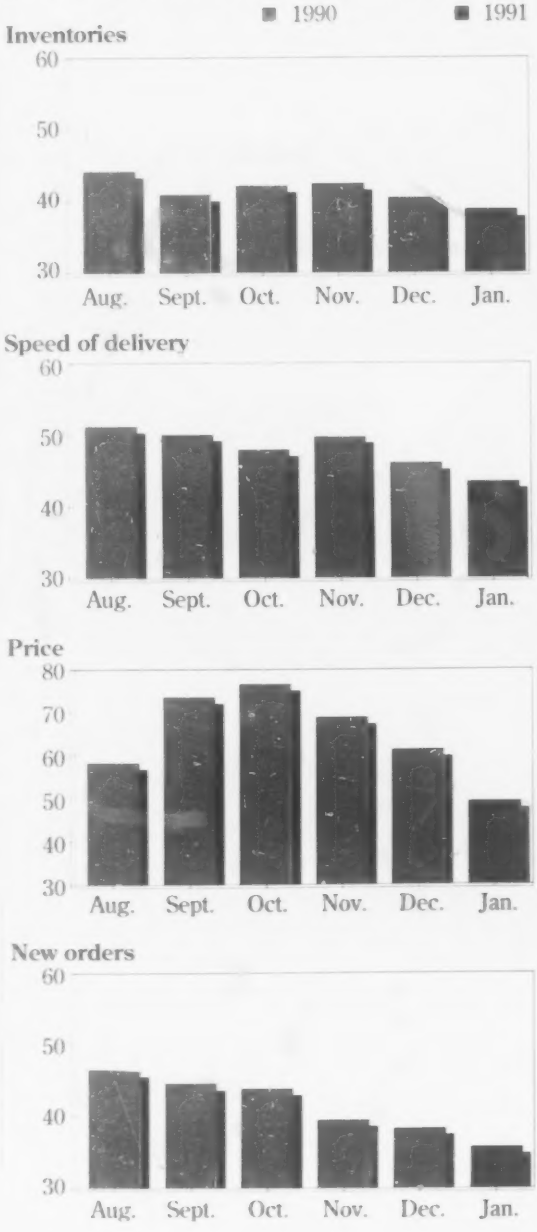
In the past, gross national product (GNP) and industrial production have declined (sharply at first) for two to three quarters when the business cycle turned down due, at least in part, to the inventory cycle.

The inventory cycle deals with the fact that once sales start to plummet, manufacturing's I/S ratio rises until sales rebound, no matter how much these firms try to reduce inventories. As a re-

NAPM procurement trends

(Seasonally adjusted diffusion indexes)

An index where 50 is defined as the neutral level, to the extent a reading is above 50, it represents an expansionary tendency. More particularly, rising inventory, prices and new orders are seen as positive signs of economic growth. A trend toward slower deliveries is similarly interpreted.



sult, the number of months the manufacturing I/S ratio tends to rise is highly correlated with the duration of previous recessions. Historically, they not only move together, but the manufacturing I/S ratio peaks one-to-two months prior to the economy's bottoming out.

Dr. Michael Evans, the economist for the American Production and Inventory Control Society expects the manufacturing I/S ratio to rise only 13%, to 1.70, in the current correction. This increase is roughly half of that which occurred in 1981, when it took 14 months for the ratio to peak. On the surface, such inventory movement would suggest a less-than-normal slide in GNP and industrial production.

Unfortunately, the retail I/S ratio, which has not previously shown any cyclical tendency, may begin to display one. There seems to have been a structural shift in the relationship of manufacturing and retail inventories, which is why since last April I have been warning manufacturing buyers to carefully monitor their downstream retailers.

Retail I/S ratios are at historical highs and the service sector is in the midst of a shakeout, implying that retail inventories might be about to make their presence known.

LATEST SPOT MARKET PRICES

	Latest price	Previous month	Jan. 1991
FERROUS METALS			
Steel, bars, stainless, 303, cwt	188.00	188.00	188.00
Steel, bars, HR carbon, 1000 series, cwt	19.20	19.20	19.20
Steel, bars, HR carbon alloy, cwt	25.00	25.00	25.00
Steel, bars, CF carbon 12L14, cwt	35.25	34.00	34.00
Steel, plates, carbon, cwt	24.25	24.25	24.25
Steel, plates, strip mill, cwt	25.35	25.35	23.60
Steel, plates, alloy, cwt	34.05	34.05	34.05
Steel, sheets, C.R., class 1, cwt	31.90	31.90	30.65
Steel, sheets, HR, cwt	24.00	24.00	23.00
Steel, sheets, stainless, 304, cwt	124.00	124.00	124.00
Steel, strip, HR carbon, cwt	22.10	22.10	22.10
Steel, strip, CR carbon, cwt	36.18	36.18	36.18
NONFERROUS METALS			
Aluminum, unalloyed ingot, lb	0.67	0.70	0.71
Aluminum, alloyed ingot, 355, lb	0.89	0.94	0.94
Aluminum, secondary ingot, 380, 30000 lb lot	0.71	0.71	0.71
Antimony, lb, merchant	0.78	0.80	0.85
Cadmium, N.Y., dealer, lb	2.80	2.90	1.20
Copper, electrolytic wire bars, lb	1.19	1.30	1.23
Copper, cathode, full plate, lb	1.09	1.19	1.16
Gold, N.Y., troy oz	376.95	390.80	384.85
Lead, common, N.Y., lb	0.33	0.37	0.38
Magnesium, pig ingot, (99.8%), lb	1.43	1.50	1.63
Mercury, 50 fl. lots, N.Y., fl.	175.00	175.00	185.00
Molybdenum, oxide, canned, lb	2.65	2.70	3.35
Nickel, cathode, dealer, lb	3.96	3.88	4.03
Platinum, dealer, oz	390.00	408.00	418.00
Silver, N.Y., troy oz	3.84	4.12	4.10
Tin, N.Y., dealer, lb	2.59	2.50	2.63
Zinc, high grade, lb	0.57	0.63	0.70
Zinc, die casting alloy, No. 3, lb	0.78	0.78	0.78
PAPER (unit=ton)			
Uncoated book #3 offset	940.00	940.00	940.00
Uncoated bond #4, 83 bright	860.00	920.00	900.00
Watermarked bond, 20 lb sheets	1090.00	1090.00	1090.00
Unbleached kraft paper, grocery bag, 30 lb	660.00	660.00	660.00
Bleached kraft, grocery bag, 30 lb	800.00	800.00	800.00
Solid bleached kraft paperboard, folding	830.00	830.00	830.00
Kraft linerboard, 42 lb, domestic, East	350.00	360.00	370.00
Kraft linerboard, 42 lb, domestic, West	360.00	370.00	410.00
Newsprint, 30 lb, East	594.00	565.00	565.00
TEXTILES (unit=lb)			
Acrylic, open-end spun, 1/18, unbranded	1.61	1.61	1.74
Carded cotton, ring-spun, 18/1	1.56	1.56	1.56
Carded cotton, open-end spun, 18/1	1.30	1.25	1.35
Combed cotton, ring-spun, 100%, 18/1	1.76	1.71	1.75
Nylon, textured, 70/2	2.70	2.70	2.70
Polyester, 50/50% carded cotton, 30/1	1.75	1.85	1.77
Polyester, ring-spun, 100%, 16/1, unbranded	1.53	1.54	1.48
Rayon, high-wet modulus	1.48	1.46	1.48
CHEMICALS			
Acrylonitrile, tanks, lb	0.36	0.36	0.36
Ammonia, anhydrous, tankcars, ton	125.00	125.00	125.00
Benzene, gal	1.47	1.50	2.00
Caustic soda, metric ton	340.00	335.00	335.00
Cresylic acid (over 25%), tanks, lb	0.55	0.60	0.60
Formaldehyde, 37%, (12%-15% meth.), tanks, lb	0.15	0.12	0.12
Glycerine, synthetic, 96%, tanks, lb	0.75	0.76	0.76
Methanol, syn., barges, Gulf Coast, gal	0.58	0.54	0.47
Naphthalene, crude, tanks, lb	0.17	0.20	0.20
Phthalic anhydride, molten, tanks, lb	0.46	0.51	0.51
Polyethylene resin, low density, lb	0.44	0.48	0.48
Polypropylene, homo-injection, lb	0.43	0.44	0.49
Polystyrene, general purpose grade, lb	0.53	0.58	0.58
Polyvinyl chloride, pipe grade, lb	0.34	0.36	0.36
Soda ash, light 58%, 100 lb, paper bags	165.00	160.00	160.00
Styrene monomer, 99.6%, tanks, lb	0.41	0.45	0.48
Sulfur, dark, Tampa, FL, long-ton	140.00	140.00	140.00
Sulfuric acid, 66%, commercial, tanks, ton	69.89	69.89	69.89
Titanium dioxide, anatase, reg., carlots lb	0.99	0.99	0.99
Xylene, Gulf Coast, spot, barge, gal	0.95	1.05	1.50
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	334.48	325.99	323.35
Lumber 2x4 pine, mbf, cl	320.64	315.31	315.38
Plyform, 3/4", msf, cl	576.00	592.22	595.80
Plywood, 5/8", msf, cl	347.35	353.10	361.95
Cement, type 1, bulk, ton	63.39	62.10	62.10
Sand, concrete, ton, cl	6.48	6.87	6.87
Ready-mix concrete, 3000 psi/cu. yd.	50.38	49.65	49.65
Crushed stone, base course, ton, cl	6.39	6.18	6.18
Concrete blocks, sand/gravel, 8"x8"x16" per hundred	85.19	84.47	84.47
Reinforcing bars, grade 60, per cwt.	21.24	21.49	21.71
Asphalt paving AC-20, ton	130.99	122.72	122.72
Concrete sewer pipe, 24", per ft, cl	17.64	17.50	17.79
FUELS			
Crude oil (W. TX Int.), bbl	21.42	28.44	30.25
Diesel (reseller rack, Chi.), gal	0.63	0.74	0.90
Heating oil No. 2 (N.Y.), gal, spot	0.71	0.81	0.86
Heating oil No. 2 (Gulf spot), gal, spot	0.65	0.79	0.84
Fuel oil No. 6 (N.Y.), tank car contract	18.35	23.35	23.35
Gasoline (prem unlded N.Y.), gal, spot	0.70	0.73	0.80
Gasoline (reg unlded N.Y.), gal, spot	0.68	0.71	0.78
Kerosene (reseller rack, Chi.), gal	0.73	0.82	1.00
Propane, spot	0.27	0.44	0.50
SCRAP MATERIALS			
Aluminum, old sheet & cast, cl	0.43	0.43	0.42
Aluminum, mixed clips, cl	0.49	0.48	0.49
Brass, yellow solids, cl	0.61	0.62	0.62
Copper, No. 1, brass ingot makers', cl	0.95	1.02	0.97
Copper, No. 2, brass ingot makers', cl	0.87	0.93	0.87
Steel, no. 1, hvy., dlvd., Pitts., ton	103.00	105.00	105.00
Steel, no. 1, hvy., dlvd., Chi., ton	100.00	105.00	105.00
Zinc, old, smelters scrap, cl	0.30	0.30	0.30
Zinc, die cast slab, smelters scrap, cl	0.36	0.36	0.36

Sources: Metals week, American Metal Market, Engineering News-Record (20-city averages), America's Textiles International, Journal of Commerce, Chemical Marketing Reporter, Pulp and Paper Week, Chemical Week and Plastics News.

*This page has been revised to better serve you.